



Department Application Bronze and Silver Award



Name of institution		
Department	Computer Science	
Focus of department	STEMM	
Date of application		
Award Level	Bronze	
Institution Athena SWAN award	Date:	Level: Bronze
Contact for application <small>Must be based in the department</small>		
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Departmental website	www.aber.ac.uk/en/cs	

Blue text may include clickable links in the PDF version of this submission, depending on the PDF reader used. For instance, the “2” in “see Section 2” contains a hotlink to p. 9.

This version is for publication on the web. Following University advice we have redacted certain information which may be sensitive and/or personally identifiable. Redacted sections are marked.

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List of Abbreviations

ASCo	Athena SWAN Coordinator
CS	Computer Science
DoPGR	Director of Postgraduate Research
DoPR	Director of Publicity and Recruitment
DoR	Director of Research
DoT	Director of Teaching
EDC	Equality and Diversity Committee
FTE	Full-time equivalent
HoS	Head of School
HR	Human Resources
PGR	Postgraduate Research (typically PhD students)
PGT	Postgraduate Taught (typically MSc students)
SAT	Self-Assessment Team
SL	Senior Lecturer
UG	Undergraduate
WEO	Welfare and Equality Officer

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1. LETTERS OF ENDORSEMENT FROM HEAD OF DEPARTMENT

*The following pages contained signed letters from our current Head of Department.
The word count for the letter is **FIXME** words.*

Example Document

2. DESCRIPTION OF THE DEPARTMENT

(527 words)

The Department of Computer Science (DCS) is part of the Institute of Mathematics, Physics and Computer Science (IMPaCS) at Aberystwyth University (AU). Starting out as a set of computing modules offered by the Department of Mathematics, DCS was formed over 40 years ago, and has subsequently grown to become one of the largest departments at AU with 30.4 academics, 686.0 undergraduates, and 41.4 postgraduates. Of these, 9.8 academics, 63.0 undergraduates and 10.3 postgraduates are female.

Administrative and technical support is organised at institute level, with 8.16 technical (all male) and 8 administrative staff (6 female). DCS represents about 50% of IMPaCS by staff and students FTE, and support staff effort is shared in roughly the same proportion.

The Head of Department (HoD) has overall responsibility for managing academic staff, assigning teaching and administrative duties, and holding monthly staff meetings. They are assisted by a Director of Learning and Teaching who organises monthly meetings. We also hold monthly research meetings organised by our research development officer. All staff are invited to these three meetings. The department holds monthly Athena SWAN committee meetings with a subset of the department (including the HoD). In addition to these departmental meetings there are institute level meetings: Institute Executive, Research Committee, Learning and Teaching Committee and Postgraduate Committee.

The department is driven by interdisciplinary research with high impact real-world applications; during REF 2014, DCS was placed 1st in Wales and 11th in the UK for Research Intensity. Research is divided into four groups: Advanced Reasoning; Bioinformatics and Computational Biology; Intelligent Robotics; and Vision, Graphics and Visualisation. Staff and students within the research groups are diverse; one group is led by a woman.

Our research areas are reflected in our undergraduate and postgraduate degrees, which include areas such as AI and Robotics, and Graphics, Vision and Games in addition to straight Computer Science and Software Engineering. We also offer more business focussed degrees such as Business IT and Internet Computing and Systems Administration. All our degrees come with either a compulsory or optional year in industry, and about half our students take the opportunity to gain experience on a placement. Our graduates enjoy good employment prospects, with a graduate prospects score of 95% in the last DHLE survey, in part due to the industrial year. Our student satisfaction is good and improving, reaching 91% in the last NSS, significantly higher than the UK average of 86%.

The department has developed a culture which nurtures and encourages staff and students of all backgrounds and interests to engage in social activities and self-directed learning, with a focus on keeping computing a fun and compelling field to work in. Students within DCS have self-organised to form several groups, including: AberCompSoc, the BCS Student Chapter at AU, whose committee is made up of 4 men and 2 women and current President is female; AberCompSci Women, a group for DCS women students; and AberSailbot who build autonomous sailing robots and successfully compete internationally.

Our analysis identified five key issues, shown in Table 1. Our action plan (p. 41) contains eight groups of actions to directly address these five issues, ...

No.	Issue	Addressed by
1	Issue 1	1 and 2
2	Issue 2	Action Group 4
3	Low numbers of female contract research staff	Action Groups 3 and 7

Table 1: A caption

3. THE SELF-ASSESSMENT PROCESS

(1085 words)

3.1. A description of the self-assessment team

The self-assessment team (SAT) aimed to achieve broad representation from within the department, and colleagues from other parts of the institute. Members have been selected based on interest in and commitment to Athena Swan principles rather than existing roles within the University. The members from Mathematics and Physics are on the SAT in order to observe the process (with a view to submitting their own AS applications in the future) and also to provide an outside perspective, particularly with reference to Physics who have recently been through the Juno process. The SAT aimed at student participation throughout the process, but it proved difficult to recruit interested students and ensure continuity as all students in the initial team were in their final year and graduated during the process.

Note. An Action table should go here. I haven't worked out how to do that yet.

We have made first steps by involving a foundation year student this year.

Self-Assessment Team (Computer Science)

Name, Roles	Profile
Hannah Dee, Senior Lecturer, Chair (2015-2017)	Joined AU in 2010, SL in 2014. BCSWomen committee member, Lovelace colloquium chair, 9th on CW Women in IT list.
Christine Zarges, Lecturer, Chair (2017+)	Joined AU in 2016 as L. ACM-W mentor, co-organiser Women@GECCO workshop series. Partner is SL at AU.
Bernie Tiddeman, Reader and Head of Department	Joined Aberystwyth Feb 2010 as SL, HoD in Dec 2013, Reader in 2015. Father of 3 primary age children.
Angharad Shaw, Lecturer	Joined AU 1989-1991 as RA. Returned for RA 1996, then lecturing post 2001. AU Equalities committees since 2011.
Helen Miles, Associate Lecturer	Joined AU in 2014 as a PDRA, temporary TF in 2015, permanent AL in 2016. BCSWomen committee member.
Myra Wilson, Lecturer	Joined AU in 1993 as RA, L 7 month later. 2 children, works part-time since 2004. WUMS mentor.
Reyer Zwiggelaar, Professor	Joined AU in 2004 as SL, P in 2009. DoR since 2010. Head of Graduate School since 2014. Married, 2 children.
Thomas Jansen, Senior Lecturer	Joined AU in 2013 as SL. Previous universities in Ireland, Virginia, Germany. 3 adult children. Partner is L at AU.
Azam Hamidinekoo, PhD Student	A full-time PhD student, joined AS team from 2016, participant of BCS and women in computer science conferences/workshops.
Leena Sarah Fahrat, Foundation Year Student	A full-time undergraduate student on our Computer Science scheme including foundation year; Lovelace Colloquium participation in 2017; Student ambassador at open days.
Michelle Symes, Administrator	Joined AU in 2012, spent 9 years at Wolverhampton University. Member of AUA and AAT.

Table 2: Members of the self-assessment team (SAT)

Self-Assessment Team (members from other departments in the institute)

Name	Roles and Profile
John Gough, Professor (Physics)	Head of Quantum Sciences research group, chair of the Equality and Diversity Juno Committee in the Physics Department.
Simon Cox, Professor (Mathematics)	Head of Department
Rachel Cross, Lecturer (Physics)	Lecturer in Physics, currently on maternity leave
Alex Pitchford, PhD Student (Physics)	15 years as IT consultant. 4 years in AU as UG, now in third year of PG. Institute PG representative. PG representative on Juno committee.

Table 3: Members of the self-assessment team from other departments

3.2. An account of the self-assessment process

The department of computer science is the first department at Aberystwyth University applying for a Bronze award following the University's successful submission in 2014. The first meeting of the SAT took place in 08/2015. Since then, it has met monthly during term time to discuss ideas and data and to develop the Action Plan. As an early result in response to a request from staff during a SAT meeting we moved our weekly research seminar to fit into school hours, allowing them to attend.

Further discussions were facilitated by an Athena Swan email list. The application itself was developed collaboratively, with additional informal meetings to discuss sections and data as required.

To get more insights into the views of female staff and students a series of focus groups (staff, undergraduate students, PhD students) was held with refreshments to encourage participation. The results were used to inform the development of the Action Plan. In addition, the SAT planned to use relevant department data from a university survey that was conducted among all members of staff across all departments. However, a very low number of staff responses (7) and resulting anonymity concerns made it difficult to use the data.

Several members of the SAT are participating in a number of related committees and activities, or have Athena Swan experience from other universities (Dee: Leeds SAT, 2007-9; Zarges: Birmingham Computer Science SAT 2012-16, Vice-Chair 2015-16). We also have institutional SAT experience within AU (Dee 2011-2017; Zarges 2017+; Wilson 2017+; Shaw 2012+). Zarges visited the department prior to her appointment to share her experience on the Birmingham Athena Swan application. Dee and Zarges have both attended "Cignets" (Athena Swan in Computer Science) meetings. To obtain further input for our application, we invited representatives from the other two departments in the institute, Mathematics and Physics, as the latter has just successfully applied for a Juno award. These inputs were invaluable in helping us to form a wider context for the Action Plan.

3.3. Plans for the future of the self-assessment team

The SAT will become the Athena Swan committee and continue to meet on a monthly basis to continuously monitor the progress of the Action Plan, measure

the impact of implemented actions and discuss potential additions and amendments to the current plan. Priority will be given to maintaining bronze status, but we will monitor options to go for silver throughout the process.

One important goal of our Action Plan is to embed Athena Swan principles into our departmental culture and to achieve impact through raising awareness on all levels. To do this the Assessment Team will monitor specific areas of concern in line with the key aspects of departmental activities i.e., administration, staff and student recruitment and engagement with external Institutions and companies.

By aiming to embed actions into already existing policies and procedures it is believed that the Assessment team can more effectively target and influence decision making processes with regard to equality and diversity. Equality and diversity will be added as a standing item to the departmental staff meeting agenda to ensure appropriate communication and to facilitate the exchange of ideas within the department as a whole and to enable follow up via identifiable contact points for use outside these monthly sessions.

Note. An action table should go here.

We see the SAT as an overarching rather than an executive committee with the main purpose of communicating findings and overseeing activities within the department, particularly with respect to the developed Action Plan. Progress of the developed Action Plan's implementation will be reviewed and assessed for impact at designated points through the coming year and a summary of overall impact being produced to build confidence in the process and provide achievable on going targets for all staff members.

Note. Another action table goes here.

Responsibilities for specific actions will be delegated to roles within the department and where necessary, the SAT will set-up sub-working groups for specific topics and monitor their efforts to ensure that activities are aligned with each other and the current Action Plan. It will ensure that appropriate actions are implemented and aim to integrate actions within the wider University Action Plan with reporting and contributing to the University-level SAT as the long-term goal.

Note. And yet another action table.

Regular focus groups will help to monitor the success of our actions.

Note. And another.

One additional important aspect for the future of the SAT is widening participation. We particularly plan to improve our engagement with the undergraduate population. As discussed previously it has proved challenging to ensure continuity due to graduation and industrial placements, and to counter the impact of these events on the future success of the AS team we are seeking to address the turnover period of the team membership by recruiting new members early enough to allow for an interim crossover period. A set of simple guidance notes will be used to ensure a smooth transition at such points in the team membership.

Note. And yet another.

We are also keen that the work of our Athena Swan project is not borne entirely by women in the department, and so we intend place an emphasis on the recruitment of more men onto the Athena Swan committee.

Note. And another.

Raising awareness and widening participation is of particular concern given the low response rate in the University survey. In this context, we plan to set up a website summarising Athena Swan related activities including links to University facilities and policies.

Note. And the final action table for this section goes here.

Landscape page example

Figure 1: Visualisation of the self-assessment process from April 2016 –April 2017. Numbers refer to meeting listed in Table ??.

4. A PICTURE OF THE DEPARTMENT

(1676 words)

4.1. Student Data

(i) Student Numbers on Access or Foundation Courses

We introduced a foundation course part way through the reporting period for this AS application. Thus, whilst the data does not look encouraging we do not feel it is possible yet to comment on long-term trends. Current data for this course is in Table 4 below.

	2015–16	2016–17	2017–18
Women students	4 (20%)	1 (2.2%)	
Men students	16 (80%)	44 (97.8%)	

Table 4: Student numbers on foundation courses

(ii) Numbers of Undergraduate Students by Gender

We offer seven main programmes (plus the foundation), each of which has two flavours (with and without industrial year):

- G400/G401 is Computer Science
- G500/G501 is Business IT
- H602/H603 is Internet Computing and Systems Administration
- G450/G451 is Computer Vision Graphics and Games
- GH76/GH7P is Artificial Intelligence and Robotics
- GG47/GG4R is Computer Science with Artificial Intelligence
- G600/G601 is a BEng/MEng course in Software Engineering

These degree programmes have a common core, and all except Business IT have a strong software engineering and programming component.

We have very few part-time students, and do not advertise part-time courses: if students are studying part-time this is usually due to a change in personal circumstances and for one or two academic years only. A summary of full and part-time student numbers is given in Table 5.

	2013–14	2014–15	2015–16	2016–17	2017–18
Full-time men	528	574	591	619	
Part-time men	2	0	5	3	
Full-time women	57	55	62	63	
Part-time women	1	1	1	0	

Table 5: Student numbers (FTE) on undergraduate programmes by gender and full-time/part-time

All student data presented hereafter is based upon full-time figures.

When we look at the data with regard to gender split on each programme, we find that a higher percentage of men are studying computer science, and a higher percentage of women are studying Business IT. The remaining courses are approximately equal in terms of applications, proportionally. This pattern has held for the last three years, and holds from applications through to intake. This is clear from Figure ??, Figure ??, Figure ?? and Figure ??.

Note. Figures and Actions TBD.

Figure ??–Figure ?? should be studied with care—the use of percentages rather than absolute numbers causes some relationships to appear more significant than they are, as some of these programmes have small intakes. In some cases, 10% only equates to 2–3 students.

Absolute numbers (shown in Figure ??) on each programme tell a much less equal story and do not make this preference for G500/G501 obvious. It is interesting to us to see this gender split with regard to popularity, however, and this is certainly an avenue to investigate with respect to increasing women’s participation in the department. The student focus group did not talk about this split, but instead concentrated upon how they were seen as women students in DCS more broadly: “People are surprised because we don’t fit the comp-sci stereotype”.

When we look at the path from applications through to intake aggregated by gender we see that the proportion of women and men throughout the process is fairly level, when we consider all programmes together (Figure ??).

We have recently started trying to organise open and visit day interviews so that women applicants meet with women staff, and anecdotally this seems to be appreciated by some of our applicants. When asked why more women students aren’t attracted into CS, and whether admissions material or processes can be made more encouraging to women, the student focus group talked about geek culture, the perceived gender split, and stereotypes of how CS students are. With open days, they sought reassurance that women are welcome.

With benchmark data, we have compared ourselves to the UK national average and to Wales. We perform badly against both—although it does at first appear that we are making progress. This is evident from Figure ??.

Looking at the longer picture, AU CS is lower than the national average for women in CS, but has not always been so. In particular, AU CS seems to have had a dip in 2013–4 which we are currently recovering from—this is not evident from the three-year figures above. The longer view is illustrated in Figure ??.

This may be related to wider issues within the University. According to HESA figures for the UK’s current undergraduate population, 55.4% of all full-time students are women, while at AU, this is only 47.4%. The reason for Aberystwyth’s apparent lack of popularity with women students is hard to pinpoint and is one that the institutional AS team has been considering at length.

When we investigate degree attainment by gender it seems that the pattern of achievement is similar between women and men students—the percentage of men and women attaining first class degrees (and failing) seems consistent across the last three years.

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

With taught postgraduate statistics, we have a record of live applications in the system, but as the application cycle does not have the same academic year structure as undergraduate data, it is hard to extract applications by year from our information systems. Also, because of funding questions, an application will often remain live for several years whilst the student tries to obtain finance. Looking at this aggregate data (in Table 6), we find that women make up a higher proportion of accepted PGT applications (23.2%) than one might expect given the undergraduate figures.

	Men	Women
Applications	211 (78.7%)	57 (21.3%)
Accepted	159 (76.8%)	48 (23.2%)
Rejected	6 (66.7%)	3 (33.3%)
Incomplete or withdrawn	46 (88.5%)	6 (11.5%)

Table 6: Application data by gender (postgraduate taught courses)

Funding is a major difficulty for us with regard to master programmes. We have had some funding streams from e.g., Welsh Government, which have impacted our numbers positively in the past, but in the absence of these schemes we are reliant on self-funding students. Actual student data, presented in Table 7, shows that whilst over 20% accepted applications are from women, we generally have less than 10% women in our cohort. We compare very unfavourably to the UK benchmark (HESA) data in terms of the proportion of women at PGT, too. Proposed changes in the regulations surrounding student finance, allowing loans to apply to PGT courses, may well improve this matter.

	2013–14	2014–15	2015–16	2016–17	2017–18
Full-time men	25 (89.2%)	12.6 (88.4%)	11 (91.7%)	13 (81.25%)	
Part-time men	1 (5.4%)	0	0	1 (6.25%)	
Full-time women	2 (7.1%)	1.5 (9.9%)	0	1 (6.25%)	
Part-time women	0	1 (6.6%)	1 (8.3%)	1 (6.25%)	
Percentage women: UK benchmark (HESA)	23.9%	25.4%	27.4%	29.7%	

Table 7: Student data (FTE) by gender and full-time/part-time (postgraduate taught courses)

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

We were unable to obtain applications data for PGR broken down by year. We will initiate data collection procedures that will enable us to make this breakdown in future.

Note. Action table missing.

The postgraduate research degree enrolment statistics are shown in Table 8 below. As you can see from this, we perform better in terms of gender balance at the PG level than at the UG level and indeed come close to the UK benchmark figures from HESA. We have a limited number of AU PhD scholarships (10 per year). Within the DCS we have had 3 recipients of these scholarships in the past 4 years across the institution, all 3 of whom have been female.

PhD completion rates by year are shown in Table reftab:COMPPGR. During the period 2014–2017, there were three PhD non-completers: two men and one woman.

It is worth mentioning that the focus group raised some points around gender and cultural attitudes. We plan to introduce training to tackle these issues.

Note. Action table missing.

	2013–14	2014–15	2015–16	2016–17	2017–18
Full-time men	38 (82.6%)	18 (72%)	17 (63%)	16 (66.7%)	
Part-time men	2 (4.3%)	2 (8%)	2 (7.4%)	1 (4.1%)	
Full-time women	6 (13%)	5 (20%)	8 (29.6%)	7 (29.2%)	
Part-time women	0	0	0	0	
Percentage women: UK benchmark (HESA)	24.5%	25.1%	25.4%	26.0%	

Table 8: Student data (FTE) by gender and full-time/part-time (postgraduate research)

	2014–15	2015–16	2016–17	2017–18
Men	7	6	8	
Women	0	1	2	

Table 9: Completion data for postgraduate research degrees

(v) Progression pipeline between undergraduate and postgraduate student levels

The major issue in Aberystwyth with the pipeline between undergraduate and postgraduate degrees is that of student funding, and we have no evidence that the lack of funding hits men and women unequally. That said, we have very few postgraduate students particularly at PGT. The main source of PhD funding for AU students is a University level scholarship which has a limited number of places; as mentioned earlier all of the DCS scholarship holders over the last four years have been women.

4.2. Academic and Research Staff Data

(i) Academic Staff by Grade, Contract Function and Gender: Research-only, Teaching and Research or Teaching-only

Within AU, lecturers are typically appointed to Grade 7 with progression to Grade 8 upon completion of probation. Grade 9 encompasses SL/Reader. In 2014, the University promotions criteria were changed to be more transparent, and to provide a clearer route for promotion for those who work across all job families (teaching, admin and research). The effect of this change upon gender balance at Grade 9 (SL) in particular is marked, with women staff up to 25Figure ??).

Note. Figure missing.

When we break this down into teaching, research, and combined research and teaching contracts we see that there is a bulk of Grade 7 research across all years, which is heavily male. This is shown in Table 10.

	2013–14			2014–15			2015–16			2016–17		
	R	R&T	T	R	R&T	T	R	R&T	T	R	R&T	T
Wales (% Women)	7.9	19.4	27.8	20	18.2	15.8	14.3	18.8	30			
AU (% Women)	18.1	18.1	37.5	8.7	33.3	37.5	16.7	32	25			

Table 10: Staff data by contract type at AU and Wales (in percentages)

Note. Figure missing.

In terms of benchmark data, we have information about Teaching, Research and Research and Teaching contracts by gender for Wales. We present here in Table 10 our percentage of women in each role, compared against the percentage of women in each role across Wales as a whole. It is clear from this that we have a higher proportion of women who are both researchers and teachers than the national average. Researcher numbers fluctuate heavily (presumably due to contract types), as do teacher numbers to a lesser extent.

(ii) Academic and Research Staff by Grade on Fixed-term, Open-ended/Permanent and Zero-hour Contracts by Gender

AU has a policy of removing staff from zero-hour contracts and thus these are not used except in unusual circumstances (in 2016 there was one zero-hour grade 6, man, who was engaged in an ad-hoc research project, and in 2015 there was a zero-hour professor, man, who had retired and not yet negotiated a fractional appointment).

The permanent vs fixed term divide is shown in Figure ?? below. As you can see from this, the majority of fixed-term appointments are at the lower grades. These are related to research grant income. Within the department, we have four fairly well-aligned research groups and it is not unusual for research staff to move between them at contract end. We have a university-wide redeployment policy and register of posts, which is available to all staff who have 2 years of continuous service.

The problem of early-career fixed term positions is a sector-wide one. The situation is in a sense exacerbated in Aberystwyth as there are no easily commutable institutions to move between (our nearest academic neighbour, Trinity St Davids Lampeter campus, has no computer science).

Note. Figure missing.

(iii) Academic leavers by Grade and Gender and Full/Part-time Status

During the reporting period three permanent members of staff have left (all men), and one woman has retired. Exit interviews indicate the men who have left the department have all moved for geographical and/or family reasons. This is linked to the geographical isolation of Aberystwyth, and the academic “two body” problem; if an academic partner is not able to obtain work within AU, there are no alternatives within a reasonable commuting distance. Exit interviews are not routinely held at contract end for fixed-term staff, so we do not have information about this for all leavers. Figure ?? shows the full-time / part-time split of department staff.

Note. Figure missing.

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

(5630 words)

5.1. Key Career Transition Points: Academic Staff

(i) Recruitment

Departmental adverts are placed in jobs.ac.uk, on the University website, and are often circulated to the BCSWomen email list. All advertisements are bilingual (Welsh/English).

All job adverts include the line: “To promote a flexible workforce, the University will consider applications from individuals seeking full time, part time, job share, or term time only working arrangements.” and advertise AU Athena Swan, Stonewall, and Two Ticks. We have a policy of including one woman on every interview panel in AU as a whole.

When potential new members of staff visit AU, either informally or for interview, women members of the department will meet them and encourage them to apply, talking about the various women-in-tech things we do (cs-women mailing list, “Aber Comp Sci Women” student-led facebook group, informal socials, the Lovelace Colloquium and so on).

Note. Action missing.

Recruitment data for 2013–16 is given in Table 12 below. This is aggregated over grade, unfortunately, because the finer grained data was unclear and the aggregated data is the only way we could avoid the risk of double-counting. Many of our advertised posts are advertised as “Lecturer/Senior Lecturer/Reader” and thus it has been impossible to trace through from application to acceptance by grade, as we have (for example) people submitting applications to both L and SL posts in the same call. We plan to improve data collection procedures in future.

	2013–14		2014–15		2015–16		2016–17	
2-9	Men	Women	Men	Women	Men	Women	Men	Women
Applications	21 (88%)	3 (13%)	79 (87%)	12 (13%)	110 (91%)	11 (9%)		
Shortlisted	9 (75%)	3 (25%)	30 (88%)	4 (12%)	43 (91%)	4 (9%)		
Offered	6 (75%)	2 (25%)	10 (83%)	2 (17%)	10 (71%)	4 (29%)		
Accepted	6 (75%)	2 (25%)	10 (83%)	2 (17%)	10 (71%)	4 (29%)		

Table 11: Recruitment data by gender

Note. Action missing.

From this table, it is clear that we do not get a particularly high proportion of women applicants, but those who do apply tend to do well as in each year we have a higher proportion of women appointments than we do applicants.

It is worth noting here that the requirement of “at least one woman on each interview panel” has been highlighted in focus groups as a source of additional workload, particularly in STEM disciplines where there are so few women to go around. One woman reported that she had been on 7 panels in a year.

Note. Action missing.

(ii) Induction

Induction into the department consists of a meeting with the HoD to discuss workload and duties, a tour showing the obvious places (offices, labs, coffee machine, stationary cupboard, etc.) and a health and safety induction by the health and safety officer. More detailed induction is left up to the individual's mentor, and is broadly informal, but seems to work. Institutionally there are some compulsory courses which cover key systems and the university as a whole. According to our staff focus group there are issues with these surrounding the complexities of working in a large organisation (abbreviations, systems and general procedures) but it was agreed that it is a mistake to try and cover everything at the start: "Induction is too much at once. Short topic-based catchups are more useful e.g., 'how to mark exams'".

Probation: New academic staff are subjected to 2 years' probation and have a probationary mentor. Probationary policy has been reviewed and revised by Human Resources recently, and incorporated into the Effective Contribution Scheme (ECS: Aberystwyth's performance review and development scheme).

Mentoring is a key part of probation, and also of the PGCTHE which is often a probationary requirement. This means that a new individual without teaching qualification may have two mentors. Within Computer Science, it has become normal for women staff to have women mentors over the last few years, although this is not a policy.

Note. Action missing.

(iii) Promotion

Promotions data is shown in Table ??, showing applications, with the number of successful applications listed along with the percentage success rate by gender. This is not split into full/part-time or even by grade, as such a split would enable the identification of individuals.

	Men		Women	
	Applied	Successful	Applied	Successful
2014	3	0 (0%)	2	2 (100%)
2015	2	1 (50%)	3	1 (33.3%)
2016	0	0	1	0 (0%)
2017				

Table 12: Recruitment data by gender

Within AU the promotions policy changed in 2014 to become clearer, with routes to recognition across teaching, admin and research. Previously, promotions procedures had been somewhat opaque. This change has had a dramatic effect within DCS, and we have gone from "no women above grade 8" to our current position where a quarter of our SL staff are women in just 3 years. Until early 2017 there was an issue with lower grades, in particular, there was no clear route out of grade 6 for teaching fellows. This has also now changed and so there is a clear progression route from 6 up for all staff on open-ended contracts.

Support for promotion applications comes in a number of forms. Firstly, at the annual ECS (Effective Contribution Scheme) meeting staff are supported in terms of their plans and in terms of their duties (so if people need to take on extra kinds

of responsibility for promotion purposes, this can be arranged). Secondly, upon declaring an intent to submit a promotion application staff are offered a promotion mentor who can help with the forms and process. The promotions mentor is assigned by HR, and is usually from outside the department.

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

The department submitted 99.2% of its academic staff to REF 2014, the third highest proportion in the UK. In total 26 (24.8 FTEs) staff were returned, with 6 (23 submitted, 8 were early career researchers (3 women, 5 men), and 3 were part-time (1 woman, 2 men). Despite all eligible staff being returned for REF 2014, the return was recorded at 99.2%—it appears this calculation is based on HESA data which indicated the department had 25

FTE staff whereas we returned 24.8. For the department, inclusion in REF 2014 was solely based on the quality of the four outputs by research active staff members.

For RAE 2008, 17 (15.53 FTEs) staff were returned, of which 3 (18%) were women and 14 (82%) were men. Of the total staff returned, 4 were early career researchers (2 women and 2 men), and 88.6% of the eligible staff for the whole department were returned. Only two members of staff were not returned, both of whom were men.

Table 13 shows submission data from the department compared to the national submission according to HEFCE for both REF 2014 and RAE 2008. The department's submission rate is significantly above the national rate for submissions across all genders.

		AU DCS Submitted	National Submitted
REF 2014	Men	20 (100%)	67%
	Women	6 (100%)	51%
RAE 2008	Men	14 (87.5%)	67%
	Women	3 (100%)	48%

Table 13: RAE 2008 and REF 2014 submission data by gender (source: <http://www.hefce.ac.uk/pubs/year/2015/201517/>)

5.2. Career development: academic staff

(i) Training

Most of the staff training at AU is provided by the Centre for the Development of Staff and Academic Practice (CDSAP). CDSAP deliver continuing professional development (CPD) sessions, events and workshops all year round, including several accredited programmes of study—the Postgraduate Certificate in Teaching in Higher Education (PGCTHE) and the Effective Leadership and Leading in Universities. CDSAP supports staff working towards HEA Fellowships through the PGCTHE, and runs the HEA-approved Recognition Scheme in partnership with Bangor University which assesses and awards individual Fellowship submissions. CDSAP also provides the Aberystwyth Researcher programme with the Graduate School, delivering training for postgraduates and early career researchers. The e-learning group in the University run training events and “brown-bag” informal sessions, but we do not have a record of take-up by gender

for these. Finally, the Research Development Office (RDO) run training events, which we will discuss later in Section 5.2 (v).

Within the department, there is little specific training that is formal or recorded. There is however a lot of ad-hoc training, for example there are special sessions on exam marking during the appropriate season. Over the summer, we have an informal “Teaching Show and Tell” organised by the “Teaching Excellence Team” (made up of those who have received teaching awards in recent years). These are informal events and so attendance is not recorded, but the schedule is recorded¹ for the two years, we have held these sessions we have had 10 women presenters and 22 men (2016-17: 4W, 6M; 2015-16: 6W, 11M).

Students are employed to demonstrate on modules which they have already completed successfully, in this instance they are considered to be staff. During the staff focus group (which did not include any student demonstrators), it was noted that there is no formal training for demonstrators with regard to gender or equality issues.

Note. Action missing.

Additional training offered at University level includes the Aurora Women’s Leadership Programme, Welsh Crucible, and Springboard Development Programme. The Aurora Women’s Leadership and Springboard Development Programmes are offered to women staff only, while the Welsh Crucible is a programme run by a consortium of Welsh Universities focussed on early career researchers. DCS alumni from the Welsh Crucible include AS committee members Tiddeman and Dee, who both participated prior to 2013. Zarges has taken part in the Aurora Women’s Leadership Programme, prior to arriving at AU.

Uptake data for DCS staff training is collected in Table 14; data in parentheses indicate the number of courses attended, the data outside the parentheses indicates the number of individuals who undertook those courses.

	2013–14		2014–15		2015–16		2016–17	
	Men	Women	Men	Women	Men	Women	Men	Women
CDSAP Courses	25 (54)	10 (22)	17 (30)	7 (8)	19 (39)	7 (10)		
Aurora Women’s Leadership Programme	-	0	-	0	-	0		
Welsh Crucible	0	1	0	0	1	1		
Springboard Women’s Development Programme	-	2	-	1	-	0		

Table 14: Uptake of training opportunities by programme and gender

Although the uptake figures initially look low for women, when considering the number of women academics in the department we can say that the uptake has been good—6 out of 10 women have taken part in a leadership programme (one

¹This can be found at: http://bit.ly/impacs_st

staff member retired in 2016). Indeed, in focus groups, one member of staff reported that they did not apply for Aurora as they had already done Crucible and Springboard “*and there’s only so much leadership training one academic can take*”.

Note. Action missing.

(ii) Appraisal/Development Review

Over the past few years, AU’s processes to review staff development and performance have changed significantly. Prior to 2016, all staff undertook an annual Staff Development and Performance Review (SDPR), REF-eligible staff had Personal Research Plan (PeRP) meetings with the Director of Research, and the Workload Allocation and Management Model (WAMM) which accounts for time spent on teaching, research and administrative duties. These processes were each originally designed for specific purposes, but have now been combined into one—known as the Effective Contribution Scheme (ECS).

ECS is intended to be a simplified and more effective than SDPR, PeRP and WAMM were as standalone processes. It centres around one annual meeting with the staff member’s line manager, combining the three original meetings in a single discussion to ensure the quality and impact of a member of staff’s work is recognised. The ECS meeting is a review of the staff member’s current role and duties, and the activities and training undertaken since the last review; it also considers the future, with discussion on career development and what the staff member intends to accomplish within the next year. The ECS process is mandatory for all academic staff, and take-up is 100%. This is a new process, and we will monitor the effectiveness with respect to gender.

(iii) Support Given to Academic Staff for Career Progression

In addition to the training, leadership and researcher courses offered by CDSAP and at University level, there are workshops and events focussed on research, and several mentoring schemes for academic staff at AU. The Department of Research, Business and Innovation (RB&I) supports academic staff through formal events such as Grant-Writing Workshops, and on an ad-hoc basis when researchers request assistance in applying for grants. Staff may have probationary and PGCTHE mentors on an official basis. These mentors have different roles, and may be different members of staff. Mentors are assigned by the HoD and as mentioned earlier, women staff tend to have women mentors where possible.

With specific reference to the post-doctoral experience, AU is signed up to the Concordat for the support of researchers, and has a specific researcher induction pack. Full details on this can be found online²; it features a mention of Athena Swan and principles on the second page and has equalities informing it throughout.

For those interested in leaving the academic world, or “spinning out” a company based upon their work, AU careers service holds AberPreneurs Enterprise Events for students, staff and graduates which feature training, support and role model workshops.

²<https://www.aber.ac.uk/en/research/researcher-development/researcher-development-concordat/>

(iv) Support Given to Students (at any level) for Academic Career Progression

At AU, careers support is available to students across several levels:

University-level, with dedicated careers events and staff; at institute and department level; and at personal level. At University-level, AU's Careers Service is a department dedicated to running events and providing careers advice for students. They provide regular drop-in sessions and have time dedicated to appointments for consultations. The Careers Service run large-scale events for the University, which support different career interests, for instance, there were a wide variety of employers present at the 2017 Spring Careers Fair, and the 'AberPreneurs' Enterprise Events for students, staff and graduates focus on new business start-ups. In 2017, the Careers Service trialled a single, large-scale Careers Fair for the whole University; prior to this, several smaller scale institute-specific Careers Fairs were held each year. Currently, it has not been decided whether the institute fairs will continue to happen, or if they will be replaced by the single University-wide fair.

Internally, each department has an Employability Coordinator (EC), an academic who organises sessions, liaises with companies, and advertises a wide variety of roles to students. The department also runs a number of modules targeted at career-awareness and employability specifically for CS students:

Year 1: Professional and Personal Development;

Year 2: Software Engineering; Software Engineering for the Web (both are semester-long group projects);

Year 3: Professional Issues in the Computing Industry; Business Information Technology Group Project.

We believe that these modules are suitable spaces to include aspects on diversity into our curriculum to raise awareness among our student population.

Note. Action missing.

Each institute is assigned a Careers Consultant from the Careers Service, who works with the EC to provide tailored and targeted training within departments. The DCS EC organises sessions for all years during both semesters, and during semester 1 runs a weekly Employability Seminar for students in their final year.

The Careers Service run an initiative called AberGrad, which should be completed by each student on each year of their study. The aim is to direct the student towards recognising their own skills and reflect on what they have gained each year, particularly in relation to the skills commonly requested in job specifications. AberGrad is a new scheme introduced in 2016–17 as a result of a review on the previous scheme, the Personal Development Portfolio (PDP). PDP was found to be unpopular with students because it involved lengthy forms; AberGrad aims to improve engagement by dramatically reducing the work required and targeting skills more directly. We are also introducing the HEAR Higher Education Achievement Report.

For individual students, support and careers advice can also come from a Personal Tutor—this is an academic from within the department to offer academic support and advice. Personal tutor meetings occur at least once per semester every year, and whenever else requested by the student. Careers and employability are a core

component in tutor discussions. Personal tutors can also direct students to the Student Support unit, who can assess individual requirements and also offer skills based courses on topics from writing through to time management.

Perhaps the most significant thing we do for student employability is the Industrial Year program. Around half of our undergraduates will spend a year in industry (IY) between 2nd and 3rd years, and they receive a lot of support with this process. All students registered on an IY program are given a 36-hour residential course at Gregynog Hall, where industry representatives provide mock interviews and CV feedback, and we also simulate the assessment centre environment with challenges and tasks. The Gregynog IY weekend is staffed by volunteers, and we are active in trying to ensure that we have a representative set of industrial volunteers and staff on the day with at least one woman staff member in attendance at all times.

Note. Action missing.

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

AU has had several University-wide programs in place to support researchers in grant writing. Up until recently, “Research Cafe” aimed to provide an informal environment for networking and for discussion around research, including writing and submitting grant applications. This has recently been replaced by “research events” and “bitesize sessions” which are a series of mostly lunchtime sessions on funding opportunities and how to apply.

Research Development Officers (RDOs) give support with funding applications, and can advise on all aspects of the process; it is recommended that academics contact their RDO at the very outset (idea stage) to obtain maximum support. Within computer science, the main funding body is the EPSRC, and new staff are encouraged to attend the EPSRC grant-writing workshops (most recently in Cardiff). All proposals submitted are subject to internal peer review which provides both support and quality control.

5.3. Career development: professional and support staff

Not applicable to a Bronze application.

5.4. Flexible working and managing career breaks

As noted below, there have been no academic staff taking maternity or adoption leave in Computer Science in recent years (i.e., during the tenure of the current or previous HoD). There has been only one member of the administrative team taking maternity leave, and they are line managed at Institute level and are not technically part of the CS department. Hence departmental experience of these issues is extremely limited.

All the points below fall under the remit of the University’s Maternity Leave Policy: <https://www.aber.ac.uk/en/hr/policy-and-procedure/maternity/> and enquiries with our HR department indicate an enthusiasm to maintain a uniform set of benefits across departments, and so we should not deviate from the policy (even to enhance it).

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

Any period of planned leave will involve an initial discussion with the HoD to discuss duties that will need to be covered during the period of leave. This is to ensure that (a) effort is put in place to cover the work, (b) there is a transition period to ensure a smooth handover, (c) that the staff member taking leave does not feel they have to complete work (finishing or preparation for return) during the period of leave. In this meeting, any potential negative consequences can be discussed and where possible avoided. For example, if a period of research leave falls within maternity leave it could be moved so as not to disadvantage the member of staff.

Note. Action missing.

The University's maternity leave policy allows for paid time off for ante-natal care.

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

Staff who have worked for the University for 12 months before the expected birth date are entitled to an enhanced package comprising 8 weeks on full pay, 16 on half pay, 15 on SMP and 13 weeks unpaid. Employees may work up to 10 "Keeping in Touch" days, which can be used for meetings, training, or anything the employee deems useful. An employee is considered the same as other employees throughout the period of leave for most purposes (pensions, seniority, redundancy rights, annual increment, annual leave etc).

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

In accordance with the University's policy, staff can return to work at any time within the 52-week period, other than the first 2 weeks after the birth. The member of staff can request an adjustment to hours, which the university promises to give sympathetic consideration to.

Return to work would usually involve a discussion with the HoD related to duties and settling back in. There would not be an expectation of having prepared work (lecturers, papers etc) while on leave. Where appropriate, departmental funds would be used to support research activities for returning staff, as is the case for new staff, until they can (re)establish their research income.

Note. Action missing.

(iv) Maternity return rate

There have been no members of academic staff eligible for this during the Athena Swan period. One member of administrative staff has returned to work on a part time basis.

Note. Action missing.

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

During the Athena Swan period, there have been no members of staff eligible for adoption leave. Paternity leave has been taken in full by all eligible people.

(vi) Flexible working

Academic staff are committed to be present when they are involved in teaching, and other meetings. Otherwise it is completely flexible, as is the norm for an academic contract. Those on fixed hours' contracts arrange their working hours with the head of department and as far as possible their preferences are taken into account. Absences during term time need to be cleared with the HoD in advance.

If there is a need for certain hours (e.g., finish in time for school pickup) this can be made formal, and then is taken into account in the timetabling process. We have also taken it into account in the timing of our main departmental meetings (staff, research, teaching) and research seminars.

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

Part-time staff are entitled to request return to full time work. Such requests are treated sympathetically, but need to be assessed on the basis of the needs of the department and available budget. Such requests are handled by the post approval group in line with the University's flexible working policy. Staff who return to full time work are entitled to flexible working arrangements (as are other staff).

As part of returning to full time employment (or increased hours) a discussion with the HoD would take place to discuss and agree the additional duties, which should be in line with other full time staff. In general, new or restructured roles (such as teaching a new module) are given additional time in the workload allocation model to allow sufficient time to learn the ropes and prepare materials, which would apply in these cases.

5.5. Organisation and culture

(i) Culture

Gender inclusivity in general, and Athena Swan principles specifically, play a large role in the general organisation of the department. Athena Swan has been a standing item on staff meeting agendas since the formation of the departmental Athena Swan SAT in 2015. In our staff room, we have Athena Swan posters, and a file of successful Athena Swan submissions that the SAT team use both as an "inspiration" book, and as a source of evidence to show to colleagues in discussions about gender.

We ensure that women staff are present at all open days, visit days, away-days and activity weekends (first year and industrial year), and we try to ensure that all women students have a woman as personal tutor, and that all new women staff have at least one woman in a mentoring role. In recent years, we have an increasing number of trans students, and these are often supported by an appropriate tutor, although if a student transitions during their studies this may not be the case.

Note. Action missing.

As part of the Athena Swan process we have made a number of small but significant changes to the way the department works. Research seminars are now held during family-friendly hours, at the request of the SAT. There is now an annual "STEM Heroines" poster display during International Women's Day.

There is some distance left to run, however. For example, several departmental forms—e.g., module report forms—contain gendered language and refer to e.g., “Chairmans”.

Note. Action missing.

There is a CS-Women mailing list which is used to distribute information and call for informal social events (coffee mornings or after-work drinks, usually a few times a year). On top of this there is a student-led “aber comp sci women” Facebook group which is used for discussion as well as announcements. It should not need saying, but both of these mechanisms are open to all women in the department, whether cis or trans.

(ii) HR policies

Cases relating to staff equality, dignity at work, bullying, harassment, grievance and disciplinary processes will always involve liaising with HR. The institute’s portfolio manager is our main contact point with HR. The involvement of the HR department in the earliest stages of any such issues ensures the correct and consistent application of the policies.

In addition, HR provide on-line support and guidance via the web pages. CDSAP also run training sessions on bullying and conflict management, which also forms part of modules on leadership and the HR department has recently been running compulsory equalities training for all staff. Such training can help to avoid problems arising in the first place. We are lucky that we have had no problems raised by staff in the AS period, and for the only equalities issue in recent years (transitioning) we followed the advice from HR and occupational health (10 weeks leave plus phased return, all work covered, plus discussions with the staff member before and after) and no problems were identified.

Management within the department and institute are kept informed of changes to HR policies through a number of mechanisms. The HoD (along with Institute Director (ID) and Institute Manager (IM)) take part in HoD meetings twice per year, often with presentations from the head of HR. The ID meets with the university’s Senior Management Team regularly and the IM attends IM meetings twice per year. The Institute Executive meets fortnightly, and policy changes are communicated to the executive there, and then passed on to staff, usually in monthly Staff Meetings. Other policy changes may be communicated to staff via email. For major changes (e.g., the recent changes to annual monitoring of staff), HR will organise training sessions, which are often compulsory for key staff such as the HoD, ID and IM.

(iii) Representation of men and women on committees

At AU, committees run at both department and institute-level; Table 15 has data on committees at both levels.

We are a relatively small department, so a good degree of discussion is possible across the department. For the departmental “Staff”, “Learning and Teaching” and “Research” committees all relevant staff are invited to attend. For the AS committee, a call for participation was issued and those who expressed an interest and actively participated became the committee. Institute level committees do not have any official guidelines on female participation, but informally efforts are made to have a representative range of participation (e.g., by subject (maths,

Committee Type	Men	Women
Research	12 (80%)	3 (20%)
Learning and Teaching	18 (90%)	2 (10%)
Postgraduate Research	6 (66.7%)	3 (33.3%)
Postgraduate	8 (66.7%)	4 (33.3%)
Marketing and Recruitment	5 (71%)	2 (29%)
Internal and External Affairs	5 (71%)	2 (29%)
Employability	3 (50%)	3 (50%)

Table 15: Representation in committees by gender

physics and CS), language (Welsh and English) and gender). All institute level committees have female members, but is roughly in proportion to the number of female staff in the institute, so does not appear to be an issue of committee overload. Participation in University level committees is usually by members of staff volunteering or being co-opted onto them, but any such membership is added to the workload model once notified to the HoD.

(iv) Participation on influential external committees

We do not officially record membership in committees within the department, and so the data in Table 16 has been collected by an informal web-form, and represents a snapshot of self-reported committee membership as of spring 2017.

	Average number of committees inside AU but outside of the department/institute	Average number of Committees outside of the University
Men	1.7	0.8
Women	0.6	0.8

Table 16: Participation in external committees

From Table 16 we can conclude that women staff are engaging on a committee level outside of AU with a similar frequency to the men. However inside AU men carry a much higher committee burden. We have not broken this down into particular kinds of committee, and this is a job for future work.

Note. Action missing.

(v) Workload model

The workload model has until recently been calculated in-department by the departmental head, and has evolved to represent an allocation which is seen by many as fair (according to focus groups). This is being replaced by a top-down institutional model (the WAMM), but this still allows a good degree of flexibility in setting hours associated with teaching, research and admin tasks by the HoD. An individual's jobs are negotiated with the head of department, and within reason agreed upon by both staff member and HoD. The data entered into the WAMM is discussed with the HoD during the annual review (ECS meeting) and adjustments made as appropriate.

Note. Action missing.

(vi) Timing of departmental meetings and social gatherings

The department holds weekly CS Seminars during term time in which invited external speakers present on a wide variety of CS topics. Originally, the seminars were held at 4pm; early on in the self-assessment process, the Athena SWAN SAT recognised this as a problem and successfully requested the seminar slot be changed to 2pm. Departmental meetings and committees are all held on Wednesdays (when no teaching activities are scheduled), and mostly between 1–3pm.

Leaving parties are usually held at 11am with cake, rather than in the late afternoon or after work. Due to the rural nature of the University, many people drive to work from outlying villages and hence there is no real “beer culture”, apart from an early-evening drink at the end of the semester. Social gatherings are often organised via “doodle poll” to maximise attendance, and activities such as the staff Christmas meal are discussed in staff meetings and held at lunch time.

(vii) Visibility of role models

Publicity materials and images around the department are chosen to show a mix of men and women. The departmental website is driven by the same people who monitor this. On our current front page, we have a lot of people in pictures, 15 of whom are probably women, and 13 of whom are probably men (and a number who are too small to make out in audience scenes). Other publicity materials are designed with gender in mind but we have not carried out a full audit.

Note. Action missing.

Staff in the department run the BCSWomen Lovelace Colloquium, a national event for women undergraduate students. Every year the programme, fundraising, finances and publicity are run from Aberystwyth, as are student submissions and all admin. In this way, AU DCS contributes to the student experience of undergraduate women nationally: in the 10 years since the colloquium was started (by Dee, in 2008) around 600 undergraduate women have benefitted from the experience, from nearly every university in the UK. We believe that the Lovelace Colloquium has been mentioned in Athena Swan applications by all previous hosts that have applied (Leeds, Cardiff, Birmingham, Bath, Reading, Edinburgh, Sheffield Hallam and Sheffield). In April 2017 Aberystwyth also hosted the event. This brought role models to Aberystwyth, in the form of Dr Sue Black OBE, speakers and recruiters from major tech companies including Google, and Carrie Ann Philbin of Raspberry Pi. There were around 200 attendees in all this year, from 40 different universities.

Note. Figure missing.

Recent AU DCS attendees and contributions at the BCSWomen Lovelace:

2014 (Reading) 4 students and 2 members of staff attended; AU staff helped manage the speaker tech, and chaired the main event.

2015 (Edinburgh) 5 students and 3 members of staff attended; AU staff helped manage the speaker tech and chaired the main event.

2016 (Sheffield) 5 students and 4 members of staff attended; AU staff helped manage the speaker tech, the poster contest, chaired the main event and sat on the careers panel (Miles) at the end of the day.

2017 (Aberystwyth) 10 students and 8 members of staff attended the whole day, organising the entire event, sitting on the careers panel (Dee), and speaking (Zarges).

Note. Figures missing.

Staff in AU DCS also contribute to the London Hopper Colloquium, which is a postgraduate and postdoctoral event for women researchers. We have had representation on the organisation of this event for the last 7 years (Dee, 2011–ongoing; Thomas 2014–ongoing), and AU DCS postgrad and postdoc women researchers have presented at the event nearly every year since 2011.

Within the department, we have a very close relationship with the BCS, the Chartered Institute for IT (indeed two members of the AS SAT team sit on the local BCS Branch Committee). BCS events are an important source of CPD and enrichment for staff and students alike, and through BCSWomen and our committee involvement we work to ensure that the BCS program is not an all-male lineup.

Our departmental seminar series has a decidedly male bias, however, and we need to work to redress this imbalance. Over the last four years we have had the following gender breakdown (shown in Figure ??). This requires action on our part.

Note. Action and Figure missing.

(viii) Outreach activities

Outreach and engagement are major activities for many staff in the department.

We have (shared with the institute) a schools' liaison officer who takes on a lot of our day-to-day engagement with schools. This new appointment has released academic staff from a lot of administrative burden with regard to engagement work. That said, the focus groups made it clear that women academics are keen to continue to engage as academics, even though we have a dedicated outreach person who is excellent at his job. There is a strong desire amongst many of the women staff to contribute to outreach if only to show schoolkids that women do computer science too.

DCS staff (Miles and Dee) help to run the award-winning Aber Robotics Club, along with many student volunteers (around 10 undergraduates have helped throughout the year, both men and women). We have a stated aim of getting 50–50 representation in the new intake of children at this after-school club but have not yet achieved this.

As well as informal outreach based programs, AU DCS have participated in and led several funded projects looking at computer science in schools, including TECHNOCAMPS (EU, €6m), and Early Mastery (EU ERASMUS+, €170k). AU DCS staff contribute to CAS (Computing at School) Wales, and have also participated in GOWS (Get On With Science), Soapbox Science, and other public outreach activities.

In the summer of 2015, BCSWomen ran a world-record attempt to get the most people coding at the same time by holding an “Appathon”. This workshop was based upon an Android Programming for Families workshop written by Dee, and involved more than 30 sites across the country simultaneously teaching the same

course, all led by women. Aberystwyth staff not only wrote the materials but held a series of “Train the Trainer” webinars and videos for all sites in advance of the event, and hosted the largest site outside of London. The aim of this workshop was to try to change perceptions of what computing and computer scientists are, by showing families that coding can be fun, and by having women instructors lead every site. The world record was missed by a small margin, but about 1090 people participated UK-Wide.

Note. Figure and Action missing.

Growing out of work with the Early Mastery project, around Playful Coding, AU DCS has partnered with the children’s computer company KANO to run a Wales-wide coding contest for primary children based around animation and poetry. This will be announced in May 2017 with sessions over the summer to promote this. We believe that tying coding to creative subjects should help to bring in more entries from girls, but will monitor uptake to confirm or deny this belief.

Note. Action missing.

6. CASE STUDIES: IMPACT ON INDIVIDUALS

This section is not applicable to a Bronze application. However, as part of the School and University commitment towards Athena SWAN Silver in the future, the School will work on attracting case studies from staff over the life-span of the action plan to provide examples of inclusive support ([Action 8.8](#)).

Relevant Actions from the Action Plan

7. FURTHER INFORMATION

(492 words)

The HoS letter mentioned the exciting development that the School has become the first School outside North America to be accepted as an affiliate to the BRAID (“Building, Recruiting And Inclusion for Diversity”) Initiative. The BRAID initiative is a “partnership with universities across the nation [USA] to increase the percentage of women and students of color majoring in computer science. Each university committed to a set of approaches to increase diversity within their computer science departments. Each department also committed to providing data for a research study”. It is led by the Anita Borg Institute and Harvey Mudd College, and funded by Facebook, Google, Intel, Microsoft, CRA and NSF. We pro-actively asked if an application from outside North America was acceptable, and HoS then applied. We were delighted to be accepted in March 2017 as the first participating School outside the USA and Canada. This gives us access to experience of good practice in the USA and the ability to participate in ongoing research. The HoS will be attending the BRAID summit ([Action 9.3](#)).

The School has worked with the outside organisation CodeFirst:Girls for four years to provide courses giving an introduction to coding to female students in the University who are not studying CS. These courses have been extremely popular ([Figure 2](#)). As well as providing space, facilities, and organisational help, courses are taught by members of the School, typically enthusiastic PGR students. CodeFirst:Girls runs dozens of similar courses around the country: our support has made their courses in St Andrews one of their most active and successful ones.

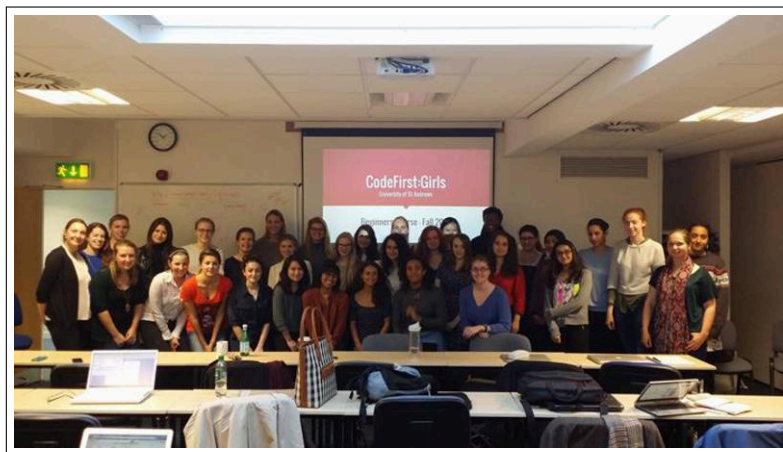
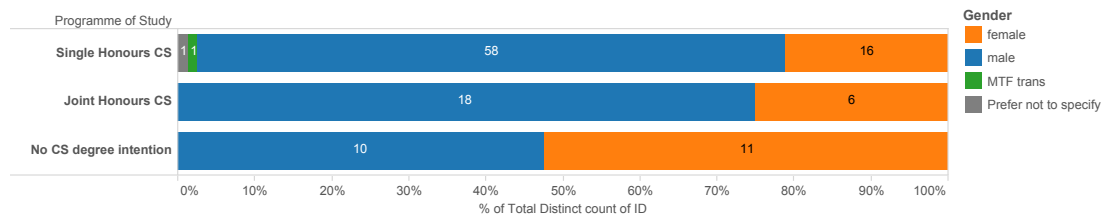


Figure 2: CodeFirst:Girls event in the School in 2016. Published on the School blog at

In September 2016, we conducted a survey with our incoming first year students, of whom 124 participated (28% female). Women are much less likely than their male peers to have taken CS at Secondary School ([Figure 3b](#)). Average ratings of programming expertise are clearly lower for women than men ([Figure 3c](#)). Most students were in favour of assigning tutorial groups based on expertise ([Figure 4b](#)). In response, for the first time, we allocated tutorial groups based on students’ self-rated experience in programming and computer science topics. This worked well and we will continue this practice. Most students do not think their gender might be a disadvantage in studying CS, though females indicate less certainty than males ([Figure 4a](#)). For some years we have avoided assigning tutorial groups containing only one woman. [Figure 4](#) shows that 12/37 females

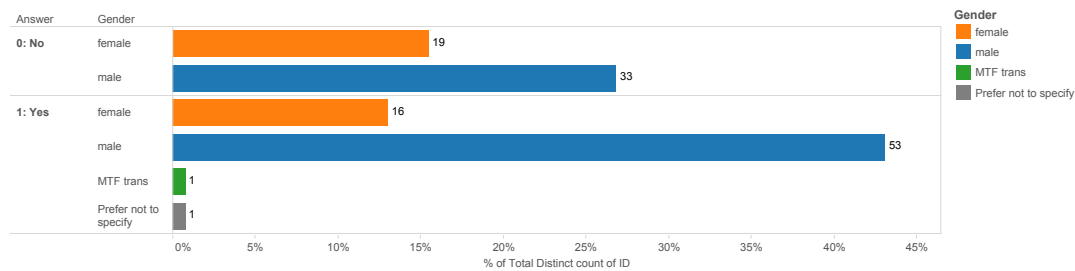
would be uncomfortable as the lone female, validating this approach. There is no expression of discomfort at mixed-gender groups in general. Unfortunately, we do have some all-male groups despite 15 males expressing discomfort at the prospect, but this was unavoidable given that we prioritised not having lone women in groups. We aim to continue entrant surveys with future incoming students. We have not conducted a survey with new MSc students this year, but aim to do so for the coming academic year 2017/18 ([Action 9.7](#)). Combined with exit interviews ([Action 9.8](#)) they should build up a valuable profile of students' attitudes over time.

Relevant Actions from the Action Plan

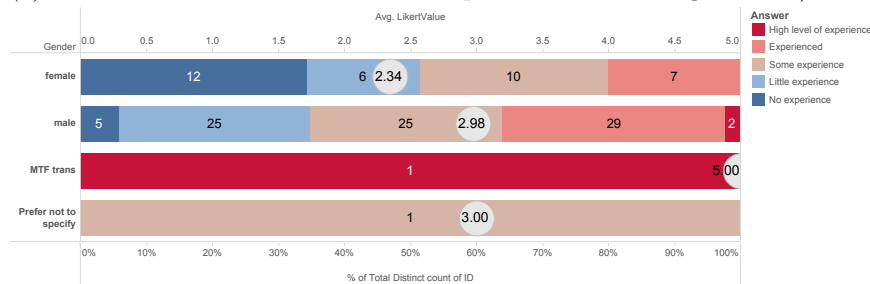


(a) Gender distribution by programme of study.

High-school experience in Computer Science

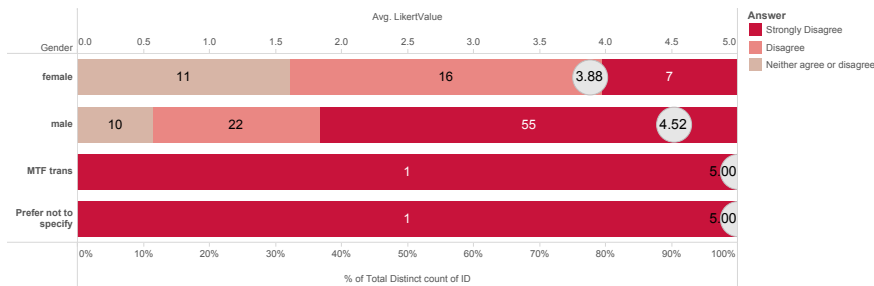


(b) Number of students who took Computer Science at High School/Secondary School.

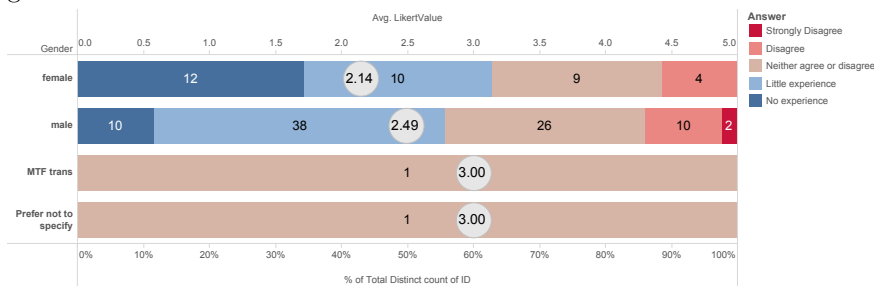


(c) Level of programming experience in programming.

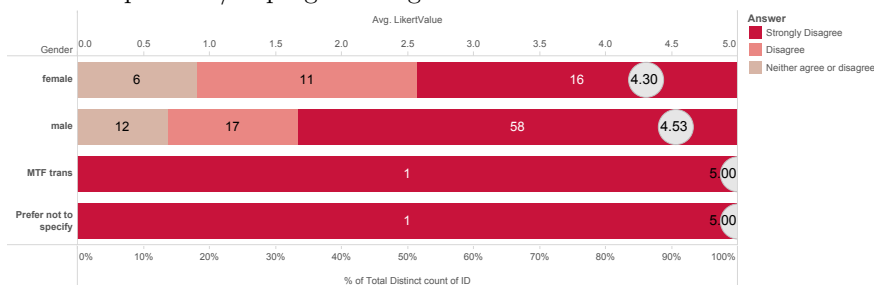
Figure 3: Gender distribution and prior programming experience of first year undergraduate students in 2016.



(a) I feel like I might be at a disadvantage studying Computer Science because of my gender



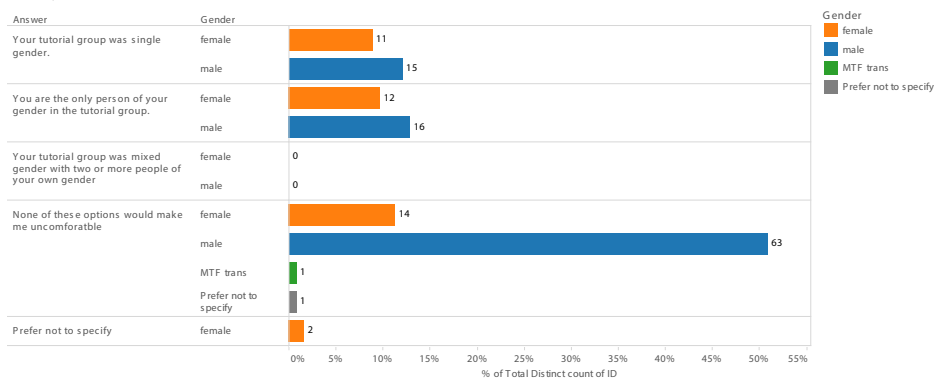
(b) How do you feel about splitting tutorial groups according to experience in Computer Science topics and/or programming?



(c) How do you feel about splitting tutorial groups according to gender?

Opinions on tutorial setup.

Would you feel uncomfortable if...



(d) Do you think you might be uncomfortable if (check all that apply).

Figure 4: First Years' preferences toward tutorial allocations.

8. ACTION PLAN

8.1. Preamble

Our actions are divided into ten action groups, eight addressing at least one of the five key issues we identified in Table 1 and summarise here: (1) promotion; (2) PGR students; (3) contract research staff; (4) career transitions including leave; (5) transparency. Two action groups address secondary, but nevertheless important, issues: namely recruitment of taught students and visibility of female role models. Each action group has an overarching ambitious SMART goal we aim to achieve in the long-term. The actions within each group come with individual, lower-level SMART goals that we can commit to achieving with sufficient work and attention in the time stated (some of them are already in motion).

In creating our action plan we have prioritised areas where our analysis suggests that women are now or have been historically disadvantaged in the School. By engaging in actions aimed at improving our performance in these areas, we should be very significantly contributing towards gender equality in the School. By design, our actions aim at not only supporting women in pursuing and advancing a career in CS, but creating and maintaining a working environment that is welcoming to all people of different genders and backgrounds. It is noteworthy that in our many discussions in SAT or working groups, female staff members and students expressed the view that in most areas women should not be the dedicated target of action. Rather, actions that make the School a better place for female students and staff will make the School a better place for everybody. In the case of our mentoring scheme (see [Action Group 1](#)), which needs to be rolled out over time, we plan to trial this with a 50:50 gender balance. This differentially advantages women in the early stages of the programme.

For each action we specify the start and end date. Some actions include a “+ annually” in their end date, indicating that, once established, the action should be completed and/or monitored annually by the SAT (or others) in that month each year.

We have paid close attention to create a realistic plan which does not overload, for example, staff members in particular positions. Therefore some desirable actions are necessarily delayed.

An important part of our plan is to monitor its success throughout its lifespan. As part of this we include a significant review after two years including a new staff survey, giving scope for revisions of the action plan as well as beginning the preparation for the next Athena SWAN submission. Where success criteria are defined as positive results in surveys, we define this as a mean score of 3.0 or higher on the Likert Scale³ for an appropriate question, achieved separately for both genders.

For each action we provide a brief rationale with a cross-reference to the main text. In “staff responsible” we list the primary responsibility first, typically HoS or Chair of relevant committee, and then the staff (group) who will do the relevant work.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 1	Career Mentoring <i>Key Issue(s) 1 & ??</i>	An extended mentoring programme will help us address many of our key issues. It will particularly help female staff with promotion and other career transition points.	This action group is mainly to enable success in other areas. In a staff survey before our next submission we aim to obtain an average Likert value of at least 3.0 from both genders agreeing with the statement “The School’s mentoring programme is valuable.”				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
1.1	Create a new role within the School of Career Support Officer (CSO)	Poor promotion record for female staff ?? <i>See p.??.</i>	A. Role defined in Staff Handbook B. Role-holder in place	A + B Aug. 2017	A + B Sept. 2017	HoS / WEO	CSO in place.
1.2	Introduce a School-wide mentoring system incorporating best practice.	Strong interest from staff in having a mentor at all phases of their career (e.g. see Figure ??), and mentors are central to several actions in this plan. <i>See p.??.</i>	A. Mentoring programme designed, trial participants assigned. B. Trial year of mentoring with 50:50 gender balance mentees. C. Full rollout with mentoring available to all staff.	A. Sep 2017 B. Jan 2018 C. Jan 2019	A. Jan 2018 B. Jan 2019 C. Jan 2020	CSO / CSO	Positive feedback from participating staff, as visible in staff survey. (Action 8.4).
1.3	Arrange an outside review of our School mentoring scheme, e.g. by CAPOD.	As the mentoring scheme is vital to several other actions, we want to identify potential areas for improvement to ensure that it works well in the long run. <i>See p.??.</i>	Review and recommendations fed back via EDC to SMG and, possibly, staff council.	June 2019	Jan 2020	CSO / CSO	Constructive feedback on Mentoring Scheme and, if applicable, improved Mentoring Scheme.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
1.4	Ensure that staff are reviewed regularly according to University's Review & Development Scheme.	Staff reviews have happened irregularly, and the outcomes are not always followed up. <i>See p.??.</i>	A. Policy for conduct and resourcing of reviews agreed. B. Review cycle completed in 2017-8. C. Review cycle completed regularly.	A. June 2017 B. Nov. 2017 C. Sept. 2018	A. Nov 2017 B. June 2018 C. June 2019 + annually	HoS / CSO, Line Managers	Reviews take place. Reviews are seen as helpful in staff survey.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 2	Promotion <i>Key Issue(s) 1, ?? & ??</i>	Ensure that female staff have equal access to promotion. We aim to ensure that all staff who are ready for promotion are encouraged to apply and given maximum support in doing so.	By end of 2021 promotion round, at least 50% of female Teaching/Teaching & Research staff who have been in post for at least four years have been promoted at least once.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
2.1	Create a Promotion Review Group consisting of senior staff with at least one member of each gender to identify promotion candidates.	Required for other actions in this group. <i>See p.??.</i>	Promotion Review Group remit in staff handbook and agreed at Staff Council	Aug 2017	Nov 2017	HoS / CSO	Promotion Review Group created.
2.2	Pro-actively identify promotion candidates for current and future years.	Low rate of application for promotion among female staff. Tendency for female staff not to put themselves forward as evidenced by statistics. <i>See p.??.</i>	A. List of potential candidates for 2018. B. List of potential candidates annually, approx. 6 months before University promotion round.	A. Nov 2017 B. July 2018 + annually	A. Dec 2017 B. Sept 2018 + annually	HoS / CSO	PRG identifies and approaches potential candidates each year.
2.3	Assign a colleague to staff identified under Action 2.2 to meet regularly and advise on presenting their case and make available a group of senior staff to provide feedback on draft applications.	Poor success rates in promotion and regrading <i>See p.??.</i>	Annual report by CSO to PRG confirming all staff who wished were provided help.	Nov 2017	Feb 2018 + annually	PRG / CSO, Assigned staff	Process found to be effective in staff surveys.
2.4	Ensure that career plans discussed in the annual review (Action 1.4) or through mentoring feed into duties allocation.	Facilitate staff's promotion prospects and career goals by aligning them with their duties allocation. <i>See p.??.</i>	Details of career plan preferences provided to SMG ahead of duties allocation process.	Jan 2018	April 2018 + annually	HoS / CSO	Staff satisfied with duties allocation in survey.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
2.5	Improve dissemination of information on promotion and regrading processes to staff.	Staff may not be aware of University/School processes surrounding promotion <i>See p.??</i> .	An email to all staff will inform about the School's processes before the promotion cycle starts. Annual CSO and/or HR presentation on promotion process in the School/University.	Oct 2017	Feb 2018 + annually	CSO / CSO	Survey shows improved understanding of the process.
2.6	Ensure that Peer Observation of Teaching happens at least every two years for each member of teaching staff. The EDC will be consulted on the arrangements each year.	This is part of the process of making sure excellence is rewarded and promotion candidates recognised, even from those (traditionally women) who are reluctant to promote themselves. <i>See p.??</i> .	A: Policy in School Handbook. B: First Cycle complete.	A + B Apr 2018	A: June 2018 B: June 2020	DoT / DoT/SM	Peer observation takes place and is judged popular in survey. Excellent teachers are identified for promotion.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 3	Contract Research Staff Key Issue(s) 3	Address the key issue of low percentage of female Contract Research Staff (CRS) by improving recruitment procedures and experience of CRS.	25% of Contract Research Staff are female by 2021.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
3.1	Unless an unavoidable project-specific restriction prevents it, all advertisements for CRS posts should highlight the possibility of flexible working.	We have observed an improved pool of candidates (both male and female) for roles where flexible working is explicitly mentioned. <i>See p.??.</i>	Default advertisement text and policy for agreeing exceptions in staff handbook.	June 2017	Aug 2017	WEO / WEO	At least 90% of advertisements for CRS posts mention flexible working 2018-2020.
3.2	Advertise on the School's website our willingness to host independent researchers funded by Dorothy Hodgkin Fellowships and other schemes. Link this to policies that promote an inclusive workplace for such researchers.	The low number of females applying for our advertised CRS positions leads us to look for alternative routes into this group. Independent fellowships are becoming more common in CS. <i>See p.??.</i>	Text for the School web site.	Sept 2017	Apr 2018	DoR / SM	Average of at least one application per year from independently funded fellows not currently employed in the University to host their fellowships within the School.
3.3	Record data on researchers named on grant proposals so we can analyse the gender-ratio over time.	Funding bodies allow grants to include a "named researcher" who is then appointed non-competitively if the grant is awarded. There is a possibility of bias in the choice of named researchers. <i>See p.??.</i>	A. School policy on recording of named researchers. B. Data recorded and available to SAT.	A. Dec 2017 B. Jan 2018	A. Dec 2017 B. Jan 2019 + annually	DoR / SM	Data available for next Athena Swan submission.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
3.4	Offer more generous travel support than the University scheme for giving additional support to staff with caring responsibilities.	The University 'caring fund' allows additional costs for, e.g., childcare or child travel. It is however limited in ways which disadvantage CRS. <i>See p.??.</i>	Policy for School funding of additional travel-related costs due to caring responsibilities.	October 2017	March 2018	DoR / SM, CSO	No staff reports being unable to travel due to unavailability of caring fund.
3.5	Ensure that the School mentoring programme includes appropriate support for CRS as well as teaching staff.	Our mentoring programme (Action Group 1) will be of benefit to all staff, but we must ensure it fits the needs of CRS. We will pay special attention to this in the full rollout phase of the mentoring programme. <i>See p.??.</i>	Consideration of activities such as mock lectureship interviews. Engagement with CRS in review of programme (Action 1.3).	Jan 2019	Jan 2020	DoR / SM, CSO	Satisfaction with mentoring programme from CRS from survey.
3.6	Write materials for website, advertisement, further particulars etc, to present the School as supportive of a diverse CRS population, including those with family and caring responsibilities.	We know our numbers of female applicants for CRS jobs are low, but our survey did not reveal significant negative factors pushing them away. We therefore aim to present positive "pull" factors. <i>See p.??.</i>	Text for further particulars for CRS advertisements. Materials advertising positive developments. CRS Alumni web page pointing to ex staff in academic and other jobs.	Apr 2018	Sep 2018	DoR / SM, CSO	Increased proportion of female applicants for advertised CRS positions.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
3.7	Review the organisation of the grant-writing club and restart it in a possibly evolved form.	A School grant-writing club was very positively received by CRS and academic staff, but has become moribund. <i>See p.??.</i>	Assign staff member with duty of running club. Working style for club.	Jan 2018	April 2018	DoR / Assigned staff member	Grant writing club assessed as useful in staff survey.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 4	PGR Student Recruitment and Experience <i>Key Issue(s) 2</i>	Improve recruitment of female PGR students by improving advertising, outreach, and recruitment processes. Improve the experience of study as a female PGR student in the School, by a range of actions targeting potential weaknesses.	35% female PGR students by 2020.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
4.1	Design and implement a systematic data collection program that spans the full PGR application process (pre-application, application and post-application), including funding decisions made by the School.	Current data collection is scarce, making it difficult to identify problems and prioritise effective solutions for these problems. <i>See p.??.</i>	A. Data Collection System designed. B. System implemented. C. Outcome data made available to relevant parties.	A. Sept 2017 B. Mar 2018 C. Sept 2018	A. Feb 2018 B. Aug 2018 C. Jun 2019 + annually	DoPGR / PGR Group, DoInfras-structure	Data ready for analysis by PGR Group and in SAT annual report.
4.2	Review the language that we use in application materials and advertisements to avoid bias based on the best current evidence that is available.	Research shows that phrasing affects different demographic groups in different ways. <i>See p.??.</i>	Revised website for application. Revised advertisement and application materials.	Sept 2017	Dec 2017	WEO / PGR Group	All application materials and public facing text reviewed and revised.
4.3	Change the application procedure to facilitate prior contact with an appropriate member of staff. By changing the procedure we wish to equalise the opportunities across all application groups.	Students are currently disadvantaged if they do not contact a potential supervisor prior to application, <i>See p.??.</i>	Updated application materials online. New procedure in place.	Al-ready in progress.	Sept 2017	DoPGR / PGR Group	Data shows no discrepancy between percentage of men and women applicants having prior contact with staff.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
4.4	Organise a PhD Open Day to expose our research to a wider range of prospective candidates.	We have a good track record of attracting undergraduate students with the support of open days. <i>See p.??.</i>	A. PhD Open Day organised and advertised. B. PhD Open Day held. C. Effectiveness reviewed and event made regular if successful.	A. July 2017 B. Sept 2017 C. May 2018	A. Sept 2017 B. Dec 2017 C. May 2018	DoPGR / PGR Group	Increase in PGR applications that can be tracked back to open-day events.
4.5	Provide a means to allow prospective PGR students to contact appropriate current PGR students.	Current PGR students can provide prospective students with a better understanding of how the postgraduate community operates within the School. <i>See p.??.</i>	Contact scheme designed and implemented. Gender-mixed group formed consisting of current PGR students willing to participate.	July 2017	Oct 2017	DoPGR / PGR Group	At least 50% of new PGR students had contact with current PGR students.
4.6	Introduce a process for students to express preferences for choice of second supervisor, with assignments taking into account staff commitments.	The second supervisor can be a very important relationship for PGR students. Allowing students to request a specific supervisor should provide a better personal and academic experience. <i>See p.??.</i>	Revised second supervisor selection process.	Jan 2018	Mar 2018	DoPGR / DoPGR	Satisfaction with second supervisor assignment in PGR student survey.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
4.7	Ensure PGR reviews happen in time by more clearly timetabling them in batches. We will allow students to object to the initially selected PhD review panel without justification.	We have found it difficult to ensure all reviews happen. Allowing the student to request a different reviewer should make them feel more comfortable with the process. <i>See p.??.</i>	Revised PhD review panel appointment process.	Apr 2017	June 2017 + annually	DoPGR / DoPGR	At least 90% of PGR students reviewed each year. Satisfaction with process and provided feedback from PGR survey.
4.8	Consult with PGR students on a PGR peer-mentorship program. If desired, a scheme will be drafted and implemented.	Often the most useful support for PhD students comes from their peers. Informal mentoring is widespread but may be less available to minority/underrepresented groups. <i>See p.??.</i>	A consultation with PhD students and academics. A peer-mentorship program implemented if there is desire for it.	Sept 2018	June 2019	DoPGR / DoPGR	Consultation held. An initial design of such a programme and agreement on a plan for rolling it out if response is positive.
4.9	Encourage female UG students to take on research-related summer internships to increase awareness of research careers.	Low numbers of female PGR applicants <i>See p.??.</i>	Provide material on School Web pages. Annual email to female students.	Jan 2018	Mar 2018	WEO / WEO	At least 25% of internships in the School are held by females.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 5	Career Transition Points Key Issue(s) ??	Enhance the way that the School deals with transitional points in female staff's careers such as appointment to the School and career progression.	Positive answer from both genders on School support for career transitions.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
5.1	Check that all School nominees for selection panels have completed unconscious bias and recruitment and selection courses within three years.	This is best practice and we expect to be recruiting heavily over the next 3–5 years. <i>See p.??.</i>	Procedure documented and in staff handbook.	June 2017	Sep 2017	WEO / SM	90% of panel members have taken required courses in previous three years.
5.2	Improve the in-School induction for new staff to help them settle in quickly and comfortably.	New staff and research students need to become familiar with everyday School procedures. Staff survey indicates gaps in the current induction process. <i>See p.??.</i>	A. Checklist written of key information that new staff/PGR should be given in their first month. B. List be given to line managers/supervisors to ensure that all key information is given. C. Check by SM that this has been done.	A. July 2017 B. Start date of new staff/PGR C. Start date of new staff/PGR	A. Sept 2017 B. Start date of new staff/PGR C. One month after start date.	CSO & DoPGR / SM	Satisfaction on question on quality of our induction in staff/PGR survey.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
5.3	Introduce a formal procedure for deciding in each case how leave will be handled before, during and after maternity, paternity and adoption leave. Also for the closely related transition to part-time work or return to full-time work.	The University has formal policies for handling leave but the School has always handled it informally. This can mean that important issues are not considered, e.g. KIT days. For transition to/from part-time, it is important to agree how duties will be affected. <i>See p.??.</i>	School policy on handling leave of different types approved by Staff Council. School policy on handling transition to/from part-time work.	Nov 2017	Apr 2018	HoS / WEO	Policy in School handbook. High level of satisfaction with handling of leave-of-absence and part-time work as assessed through staff survey.
5.4	Offer all staff leavers an exit interview within the School	Whether leaving satisfied with their experience or not, the School can learn from exit interviews with staff departing for any reason. <i>See p.??.</i>	A. Process for exit interviews defined. B. All departing staff offered voluntary exit interview.	A. Jun 2018 B. One month before departure date	A. Nov 2018 B. Departure date.	CSO/SM	50% takeup of exit interviews 2019-2021
5.5	Introduce and advertise policy on availability of breastfeeding space. Provide baby changing facilities.	Staff, students and visitors to the School who wish to bring babies into the School may not feel welcome. <i>See p.??.</i>	Policy introduced and in staff handbook. Baby changing facilities in place.	Jun 2017	Dec 2017	WEO /Systems	Survey shows staff and students happy with facilities for their own and their visitors' babies.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 6	Transparency In The School <i>Key Issue(s) ??</i>	We aim to ensure that not only are School processes fair to all staff irrespective of gender, but are clearly seen to be so.	Good level of satisfaction and no gender disparity on relevant issues in staff survey.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
6.1	Complete the ongoing development of the workload model in the School.	Our previous workload model has not included all relevant activities that staff engage in, making it impossible to monitor inequalities in load. <i>See p.??.</i>	Workload model complete and documented in school handbook including guidance on expected load for different contract types.	Dec 2016	Sep 2017	HoS / HoS, DoT, DoR, SM	Survey results show staff are confident that workload model is transparent.
6.2	Design a duties allocation process which transparently takes account of staff preferences, career goals, unexpected spikes in duties in previous years, and needs of the School.	Our existing workload allocation process is opaque to staff outside SMG. <i>See p.??.</i>	New duties allocation process documented in staff handbook.	Aug 2017	Feb 2018	HoS / HoS, WEO, CSO, SM.	Survey results show staff are confident that workload allocation is fair and transparent.
6.3	Provide the opportunity to shadow or serve as deputy to more senior roles.	There is little knowledge in the School of the expectations of staff in senior roles, e.g. DoT. Women might suffer from imposter syndrome in thinking they are not appropriate for these roles. <i>See p.??.</i>	A. Documentation in Staff Handbook on pathways to more senior roles. B. Opportunity for staff to serve as deputy and/or shadow senior roles.	A. June 2017 B. Sept 2017 + annually	A. Sept 2017 B. Dec 2017 + annually	HoS / CSO	Survey results which show staff have a clearer understanding of the experience required to take on various roles within the School.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
6.4	Introduce a School policy on staff undertaking external duties, e.g. influential external committees. Record participation appropriately in workload model.	The School does not have a clear policy in this area. <i>See p.??.</i>	School policy agreed and in handbook before next duties allocation process.	Jan 2018	Apr 2018	HoS/SM	External duties recorded from 2018-9 onwards.
6.5	Analyse load experienced by staff of different genders under the revised workload model (Action 6.1). Include summary of this in our annual report (Action 8.3).	To ensure transparency and confidence in the duties allocation process, regular analysis is required to help us to check for inequalities and bias in the system. <i>See p.??.</i>	Prepare and release annual Report including gender-based summary data of workload each year.	Apr 2018 + annually	June 2018 + annually	HoS / HoS and SM	All annual reports from 2018 onwards contain gender-based summary data.
6.6	Extend and complete the School's staff handbook. Put all non-sensitive information on the public internet for easy searching. Ensure that it is maintained each year. For autumn 2017 prioritise information needed for Athena Swan actions.	Staff have poor awareness of current policies in many areas. Many new policies will be introduced by this plan. <i>See p.??.</i>	Staff handbook up to date at the start of each academic year and searchable on the internet.	Apr 2017 + annually	August 2018 + annually	HoS / SM	Handbook is online continuously and updated each year.
6.7	Complete the implementation of the revised committee structure in the School as approved in November 2016.	Having agreed the new committee structure, we need to ensure that appropriate membership, remits, etc., are in place for the academic year 2017-8. <i>See p.??.</i>	Membership recorded in duties model. Remits complete in staff handbook.	Apr 2017	Aug 2017	HoS / HoS, SM	All remits in School handbook and committee membership recorded in workload model.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 7	University Liaison <i>Key Issue(s) 3 & ??</i>	Interact with central University management and administration to ensure compliance with policy from the School and feed back concerns from the School.	In some areas we have concerns that require University action to act on, so we will lobby the University using appropriate means. Also we need to ensure that we track and take account of changing policies within the University.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
7.1	Improve School liaison with HR.	We need to be more careful to ensure we are notified and act on new HR policies as they happen, as well as ensuring that new policies the School introduces are compliant with HR policies and properly monitored. <i>See p.??.</i>	Check regularly for new HR policies. Inform relevant staff/committees of new policies and update School handbook when necessary.	Jun 2017	Sep 2017 + annually	WEO/SM	Confirmation each year that School handbook is up to date with University HR Policies.
7.2	Invite an HR representative to speak to the School, at Staff Council or similar event.	Staff in the School may not be aware of HR policies relevant to them. <i>See p.??.</i>	Invitation to HR representative.	Aug 2017	Jan 2018	SM/SM	Talk to the School by HR Representative.
7.3	Review all changed University Processes for their Effect on Gender Equality in the School. Inform staff and feed back to University as appropriate.	Staff need to be aware of changes and how they affect their career, while we also need to reflect back to the University if there are local issues which might cause problems. <i>See p.??.</i>	SAT consideration of gender effects of changed policies.	Sep 2017	Apr 2018 + annually	ASCo/SAT	Annual report identifies any issues; action plan revised if necessary

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
7.4	Work more closely with the University to provide efficient access for the School to key data related to Athena SWAN.	Our experience of developing Athena SWAN submissions is that most necessary data is available in the University but is not always easy for us to obtain. <i>See p.??.</i>	A dedicated local store of data available to CS staff relevant to equality issues, without the load of collating data from many sources external to the School.	Nov 2017	ongoing	SM / ASCo	Regular inclusion of up to date statistics in report and in front facing web-site statistics.
7.5	Work with the University to ensure that we have a record of research grant applications and successes recorded by gender.	The School does not always know about grant applications made, successful or unsuccessful. <i>See p.??.</i>	Gender-based data on grant applications available to the School.	Feb 2018	Apr 2018 + annually	DOR/SM	Gender-based data on grant applications available in next Athena SWAN submission.
7.6	Revise our policy on core hours for meetings in line with upcoming pan-University policy	The University is developing an institutional core hours policy. <i>See p.??.</i>	Revised school policy on core hours	Nov 2017	May 2018	WEO/SM	Revised policy in School handbook.
7.7	Make representations to the University about improvements to the formal flexible working process which is in place. Formalise arrangements within the School in the meantime.	Low uptake of formal flexible working, even when advertised. Anecdotal reports of concerns about it's rigid nature <i>See p.??.</i>	Correspondence with Management. Internal processes in staff handbook.	Sep 2017	Feb 2018	HoS / HoS	University changes process to be more useful for academics.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
7.8	Lobby the University to introduce a documented non-competitive pathway to permanent lecturer status for experienced CRS who clearly meet the recruitment criteria.	This should be a pull factor for potential female CRS leading to larger and more diverse field for CRS posts, and more independent fellowship applications. <i>See p.??.</i>	Representation to University management.	Jun 2017	Jun 2018	HoS / HoS	University policy introduced and documented.
7.9	Make representations to University management about a more transparent and inclusive process for appointing the Head of the School.	Current process lacks clear criteria or any systematic way of identifying candidates. <i>See p.??.</i>	Representation to University management.	Oct 2017	Jan 2018	HoS / HoS	Improved University process.

	Group Title	Description		Overall Goal and Success Criteria			
Action Group 8	Monitoring and Review of Athena SWAN Action Plan	We will ensure that the action plan is followed, the actions taken monitored for effectiveness and the plan adapted as needed to the outcomes and changes in external circumstances.		The School is able to give a detailed report on the success of its Action Plan, and any changes made to it, in a future Athena SWAN Silver submission.			
	Key Issue(s) ??	To ensure the plan is an organic document it may be changed at any time by School Council on recommendation of the SAT, but we specifically plan a major review after 2 years (Action 8.5).					
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From To		Staff Responsible	Success criteria and outcome
8.1	Merge the Athena SWAN SAT into the EDC. Athena SWAN to be first item on the agenda of each EDC meeting. When necessary hold dedicated SAT meetings.	This will ensure that gender equality issues are monitored and reviewed continuously, by a key committee with membership from all key constituencies in the School, assigned within our duties allocation process. See p.??.	A. Form merged committee B. Regular EDC/SAT Meetings	A. Jun 2017. B. Sep 2017 + quarterly	A. Aug 2017 B. Dec 2017 + quarterly	WEO / ASCo	A. EDC/SAT membership recorded in workload model. B. Report of regular SAT meetings in future Athena SWAN submission.
8.2	Form a subgroup of SAT as group to monitor this action plan to ensure actions are being followed through and effective.	Our plan will not be achieved if it is not carefully monitored through its life. See p.??.	Subgroup set up.	June 2017	Sept 2017	WEO / ASCo	Monitoring group membership defined and recorded in workload model.
8.3	Publish Annual Gender Equality Report on the School’s website.	Sharing knowledge of our progress with staff, students and public is essential to demonstrate our ongoing commitment to the Athena Swan principles. See p.??.	Report on website	Jan 2018 + annually	Apr 2018 + annually	ASCo / SAT	Annual report published each year.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
8.4	Conduct a follow-up survey every two years to check that actions are being followed through and effective.	Our staff/PGR survey was very valuable and should be repeated at the midpoint of the Athena SWAN cycle <i>See p.??</i> .	Surveys completed and results reported to WEO.	Mar 2019	June 2019	ASCo / SAT	Report on surveys to the School.
8.5	Conduct a full review of our Athena SWAN action plan to assess success of actions and revise it as necessary to achieve our strategic goals over the second half of the award period.	Plan for remaining 2 years of life of award. <i>See p.??</i> .	Revised action plan.	Sept 2019	Nov 2019	ASCo / SAT	Revised action plan on School's Athena SWAN website.
8.6	Monitor use of bank-worker contracts in the School.	Data on casual/bank-worker contracts was not provided to us by the University. <i>See p.??</i> .	Data available in annual report to School (Action 8.3).	June 2017	Apr 2018 + annually	WEO / ASCo	Historical bank-worker data available for future Athena SWAN submissions
8.7	Monitor the involvement of staff and research students at CAPOD courses.	CAPOD offer many relevant courses for staff and research students. However the School has not tracked the uptake and participation in these courses and so does not have a clear view of the gender balance of those involved. <i>See p.??</i> .	Statistics for the gender balance of staff and research students at CAPOD courses.	Sept 2017	June 2018 + annually	ASCo / SM	Historical data on training available for future Athena SWAN submissions.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
8.8	Submit an Application for Athena SWAN Silver in 2021.	We aim to have improved equality in the School to the point that an application for Silver status is likely to be successful. <i>See p.??.</i>	Appropriate individuals identified for case studies. Formation of full SAT. Working groups.	April 2020	April 2021	HoS/ASCo	Silver Application submitted April 2021.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 9	Recruitment & Teaching of Undergraduate and PGT Students	Work to increase applications from female for taught undergraduate and postgraduate programmes. We have a relatively good record in this area but cannot be complacent and also have much room for improvement.	Undergraduate and Postgraduate taught percentage of female students 5% above national benchmark statistics.				
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
9.1	Establish processes to record participation (by staff and by student volunteers) and attendance at outreach events and changes in perception of and attitude to CS in those attending. In all cases, break data down by gender.	This is prompted by the lack of data with which to monitor the image presented by our outreach activities, the workload impacts and the effectiveness. <i>See p.??.</i>	A. Process documented and reporting channels defined by Sept 2017. B. Data recorded during 2017-18 year. Analysis reported annually thereafter and acted on if necessary.	A. Apr 2017 B. Apr 2017	A. Sept 2017 B. Sept 2017 + annually	DoPR / Outreach Coordinator	Availability of data on outreach events in future Athena SWAN submissions.
9.2	Ensure that all UG/PGT applications decided in the School which meet a basic quality threshold are reviewed by an admissions officer of the same gender.	This will demonstrate a commitment to applicants of both genders that they will not be judged only by people of opposite gender. <i>See p.??.</i>	Annual confirmation from DoPR to monitoring group.	Oct 2017 + annually	ongoing, reviewed after each admissions cycle (May).	DoPR / UG and PGT admissions officers	Achieved every year until 2021.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
9.3	Share and receive best practice and contribute to current research on diversity in CS by serving as the first Affiliate School to the BRAID Initiative outside North America.	This is an outstanding opportunity for the School to play a leading part in the UK in an organisation closely aligned to our goals on improving diversity in CS. <i>See p.38.</i>	Attendance by HoS at BRAID summit. Curriculum and teaching changes considered. Annual report of developments in BRAID to EDC.	July 2017	June 2018 + annually	HoS/ASCo	Resulting curriculum changes and/or contributions to research on diversity in CS reported in next Athena Swan submission.
9.4	Consider introducing a new Joint Honours Degree with a subject such as Biology.	Joint honours degrees have slightly higher female takeup. A new degree in a subject with high female participation might increase this. This action is also part of our commitment under Action 9.3 . <i>See p.??.</i>	Investigation of pros and cons of new degree. Discussions with other School(s). Decision on introduction of new degree	Nov 2017	April 2018 for introduction from Sep 2019	DoT/DoT	New degree introduced or justified decision not to introduce one.
9.5	Through literature review and/or direct research, explore how students can best be introduced to gender Issues in CS through formal teaching methods.	Members of the School are not experts in this area but we have access to experts. St Andrews has an outstanding body of researchers on gender issues, and our membership of BRAID gives us further access. <i>See p.??.</i>	Membership of expected new University Centre in Gender and Equalities Research. Reports and proposals for changes to teaching	Sept 2017	Aug 2021	DoT/ASCo	Curriculum changes introduced through this process and/or published papers on this topic.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
9.6	Devise new plans help raise recruitment of females to taught programmes from Scottish and RUK students and feed into Action 8.5 .	Our data analysis shows a lower percentage of applications from UK females compared to those from the rest of the world. <i>See p.??</i> .	Plans to help raise recruitment of females to taught programmes from Scottish and RUK students.	Sept 2018	June 2019	DoPR/ASCo	New actions introduced with goal of raising percentage of female Scottish and RUK students 5% above benchmark comparison.
9.7	Undertake lightweight survey with new undergraduate and MSc students to gain insights on their views of gender and other issues affecting their studies.	A trial entrant survey for first years was very successful in giving insight into new students' attitudes. <i>See p.39</i> .	Statistical analysis of surveys. Identification of gender issues for undergraduates.	Sep 2017	Oct 2017 + annually	DoT/Relevant year coordinators, ASCo	Data on student expectations in future Athena SWAN submissions.
9.8	Undertake exit interview with each undergraduate student.	Exit interviews will help us get feedback on general issues and concerns on gender equality. <i>See p.??</i> .	Statistical analysis of interviews. Identification of gender issues for undergraduates.	Apr 2017	Jul 2017 + annually	DoT/DoT	Data on student experience in future Athena SWAN submissions.

	Group Title	Description	Overall Goal and Success Criteria				
Action Group 10	Visibility of Female Role-Models	Visibility of prominent females has been improving over recent years, but we need to work hard to make sure this improvement is continued.		At least 30% of seminars by women. Surveys show School is successfully showcasing women in CS.			
Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe From	To	Staff Responsible	Success criteria and outcome
10.1	Find ways to celebrate notable female Computer Scientists, either who have links to the School or not.	The two buildings the School uses and the only named laboratory are named after men. We should find a way to celebrate women Computer Scientists visibly in the School. <i>See p.??.</i>	Report on suggestions from staff and students for ways to celebrate female Computer Scientists to SMG.	August 2017	August 2018	ASCo / SAT	Visible recognition of female Computer Scientists in the School.
10.2	Ensure that at least 30% of our Distinguished Lecture Series (DLS) speakers are women.	The DLS is the School's most prestigious lecture series and is compulsory for many students. We need to ensure that female speakers continue to be well-represented in the series. <i>See p.??.</i>	Annual report that updates School on the statistics. DLS coordinator is informed if there is a danger of underachieving on this target so can prioritise female speakers.	Oct 2016	Sep 2017	ASCo / DLS coordinator	30% of DLS speakers are women in period 2016-2021. The long period reflects the fact there are only two events per year.

Action	Planned action/objective	Rationale	Key outputs and milestones	Timeframe		Person responsible	Success criteria and outcome
10.3	Ensure that 30% of School seminars are given by each gender.	Seminar and lecture series speakers have currently a good gender balance, but we must ensure that this is maintained. <i>See p.??.</i>	Periodic communication with all organisers to monitor the ratio of women/men speakers and correct imbalance if identified.	Aug 2017	Jun 2018 + annually	ASCo / SAT	A ratio of at least 30% of women speakers in School seminars is maintained every year.
10.4	Ensure that undergraduates are taught by female staff by taking into account the different student cohorts and the staff who taught them in previous years in duties allocation.	A variety of core modules have been taught by female staff in recent years, so all students in recent years have certainly been taught by female staff. However, this may change over time. <i>See p.??.</i>	In the duties allocation process, check that each year group has previously had a core module taught by a female, or is expected to in future.	Mar 2018	Apr 2018 + annually	DOT / DOT	No graduating cohort of undergraduates in 2018-2021 has had no core modules taught by female staff during their degree.
10.5	Establish a channel for communication of gender related events.	School mailing-list is used to communicate these events, but it is difficult to keep a record of events and participants. <i>See p.??.</i>	A. Establishment of a suitable communication channel that is visible to the School. B. Use of such a channel. C. Record of events advertised, record participants.	A – C. Jun 2017	A: Sep 2017 B: Oct 2017 C: on-going, annual report to EDC.	WEO /Systems	Evidence of advertised events and evidence of participation and interest in these events.