Athena SWAN Bronze department award application

Name of university: University of Hertfordshire

Department: Computer Science

Date of application: November 2014

Date of university Bronze SWAN award: 'Under Consideration - Submitted November 2014'

Contact for application: Dr Martina A. Doolan

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Departmental website address: www.herts.ac.uk/apply/schools-of-study/computer-science

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

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

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

Sections to be included

At the end of each section state the number of words used. Click here for additional guidance on completing the template.

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

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

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

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Ms Sarah Dickinson
Athena SWAN Manager,
ECU
7th floor, Queens House
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Date: 12 November 2014

Subject: Letter of Support from Dean of School

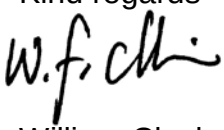
When I joined the University of Hertfordshire in 2010 to lead the School of Computer Science, I was delighted to learn that the academic staff of the School was over 30% female, and that three of the key research groups were led by women. This was a less male-dominated environment than I had experienced in much of the academic and industry computing sector in the UK, however, we want to aim for a 50:50 balance.

As Dean I am committed to increasing the participation of women in computer science, and ensuring that every opportunity is available to promote women to positions of greater responsibility and leadership. I am also committed to the success of the Athena SWAN initiative, and in ensuring that the School also maintains and increases its involvement with other initiatives such as Women in Computing being promoted by the BCS and the ACM.

The report gives full details of our policies and achievements in our drive to create a female-friendly working environment. In addition, this year within the School's student body, we have seen a female winner of a university entrepreneurship award for her project on a video security system using a Raspberry Pi. The student won prize money, commercial mentoring, and entrepreneurship support. Also, there was female participation in our RoboCup robotic football team that took the world 2nd place in Brazil last summer. These are outstanding achievements that we hope will encourage more young women to experience the creativity and excitement of computer science.

I give my full support to the Athena SWAN team within the School led by Dr Martina Doolan, to the report they have produced, and to the action plan they have developed. A Bronze Award would be a great way to recognise what we are doing to recruit, retain, and promote women in the School of Computer Science.

Kind regards



William Clocksin
Dean of the School of Computer Science

Word count: 307 words (body of letter only)

2. The self-assessment process: maximum 1000 words

Describe the self-assessment process. This should include:

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

The School Athena SWAN Self Assessment Team (SAT) was established in March 2014. The group's agenda and composition is set out in terms of reference provided by the University's SAT and aligned with the Athena SWAN Charter and Principles. The group comprises individuals with diverse life and career experiences, including primary carers of children, and a balance between academic, research and administration staff in early, mid and senior careers (Table 1 below). Initially there were three males and six females on the team. To address this imbalance and raise awareness of the relevance and importance of Athena SWAN to both genders, the Dean of School organised an Athena SWAN Away Day on the 17th of September, attended by both academic and administrative staff. As a result, Dr Joseph Spring joined the team. The School SAT reports to the University's Central SAT, which is responsible to the University's Research Committee, chaired by the Pro Vice-Chancellor (Research and International). The Chair of the School SAT, Dr Martina A. Doolan, is the School Athena SWAN Champion and sits on the Central University SAT and the University's Research Committee.

Computer Science School Self Assessment Team (CS SAT) Membership

Name	Designation	Biographical Data
Dr Martina A. Doolan	Chair of School SAT; School Athena SWAN champion; member of the Central University SAT; Principal Lecturer.	Independent researcher, successfully completed PgCert, PgDip, MA and Doctorate whilst working in this role. National Teaching Fellow, Member of the BCS Women's Group and Computer Weekly Women in IT. Martina is a single parent with two children.
Professor Bruce Christianson	Member of CS SAT; Associate Dean (Research); Professor of Informatics and Head of the Centre for Computer Science and Informatics Research (CCSIR).	Married to an NHS Consultant Clinical Neuropsychologist; two children who both enjoyed attending the University Day Nursery.
Dr Volker Steuber	Member of CS SAT; Reader in Biocomputation and Head of the Biocomputation Research group. School Research Student Tutor and Deputy Head of Research Degrees of the Science and Technology Research Institute.	Married, two children, partner works part-time, share childcare.
Dr Joseph Spring	Member of CS SAT; Senior Lecturer.	Married, wife manager of a prison educational department. Independent researcher recently completed a part time PhD whilst working full time in this role. A member of Bedford College Society (originally a female university college).
Mrs Jo Horridge	CS SAT Administrator; Executive Assistant to the Dean of School.	Married with 3 children and grandchildren plus elderly parents. Successfully completed BA (Hons) at the University of Hertfordshire whilst working and bringing up children. Has done a variety of voluntary roles in the community including Chairman of the Council & Town Mayor with small children in 1998/99 and currently still involved in scouting (for both genders) whilst working in this role.

Kay Robertson	Member of CS SAT; HR representative (University role).	Previously completed MBA part time and currently undertaking part time PhD whilst working full time in this role. Previously has worked as Equality Officer for large local authority.
Dr Katerina Finnis	Member of CS SAT; Athena SWAN Officer based in the Equality Office (University role). Member of the Central University SAT.	In a dual-career marriage with two young children. Works part-time and flexibly. Previously a senior lecturer in Linguistics, Katerina completed her PhD part-time following her first maternity leave.
Sylvia Beka	Member of CS SAT; PhD research student and visiting lecturer in Bioinformatics; Early Career researcher.	Single, actively encourages fellow female researchers through organising extracurricular activities, participation in the Cambridge EBI and Wellcome Trust Sex in Science and as a member of the AAAS and Bioinformatics Italian Society. Sylvia is an author for Mathematical and Statistical Aspects of Molecular Biology Workshop UK.
Yi Sun	Member of CS SAT; Senior Research Fellow.	Married with one child in primary school. Partner works as a management consultant. Partner helps with childcare when he can.

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

The School SAT first met in March 2014, led by School Athena SWAN champion Dr Martina A. Doolan, and assisted by Professor Bruce Christianson, Associate Dean (Research).

In addition to six formal meetings, the team engaged in twice-weekly informal meetings, and regular discussions with staff within the School, to raise awareness of the Athena SWAN agenda and gain commitment to it. Dr Doolan presented the Athena SWAN agenda and updates at the School's 'News and Views' monthly meetings and at the School's away day. The outcomes informed this application. Staff perspectives were captured through ten one-to-one discussions with the Chair, and twenty individuals' written narratives on role and motivation, career development, support structures and obstacles. These narratives provided insight into staff perceptions of prevailing culture within the school, and were showcased anonymously during the School Athena SWAN away day. An online survey was used to ascertain staff views on flexible working practices. Actions in the plan were also informed by Computer Science staff data from the 2013 University staff survey, which was managed externally. Prof Bruce Christianson reported on progress to the weekly Senior Executive Group.

Throughout the process, the School SAT engaged with Ms Min Rodriguez (University Head of Equality), Dr Katerina Finnis (University Athena SWAN Officer) and the Central University SAT. All members of the SAT provided regular feedback on draft applications and action plans. This helped to expose synergies among the University STEMM School SATs, identify good practice, and raise awareness of the challenges facing female staff. These shared insights informed our School application and action plan. Dr Doolan attends monthly University SAT meetings, which provide an opportunity to meet with other STEMM School Athena SWAN champions, share best practice, gain feedback on drafts and benchmark internally the submissions. Mrs Jo Horridge attends other School SATs and, in turn, members from SATs in other Schools attend our meetings to share good practice. Dr Yi Sun and Sylvia Beka sit on the University Researcher Development Working Group, which exists to highlight researcher development issues and coordinate the University's assessments for the HR Excellence in Research badge. Dr Steuber and Professor Christianson sit on the University Research Degrees Board. Professor Christianson sits on the University Research Committee and Dr Doolan is the Athena SWAN representative on this committee.

Externally, we contacted the University of York and benchmarked our Athena SWAN submission against their successful Computer Science application. Dr Doolan regularly consults with the York lead, Professor John Clark, who acted as an external advisor to our submission. We shall continue to draw on his experience and knowledge: one planned event is an EPSRC grant workshop combined with an Athena SWAN awareness event **(Action 1.1)**. We will ensure that females are well represented at this. Dr Doolan, working with the Equality Challenge Unit (ECU), acted as observer to an Athena SWAN Review panel. This provided invaluable insights into the assessment process. The British Computer Society is co-ordinating an Athena SWAN event hosted by Professor Clark, aims to encourage engagement with Athena SWAN and to provide a forum for Computer Science Departments to exchange ideas and share best practice. Members of the CS SAT will attend this event and report back to the SAT to inform future actions **(Action 1.2)**.

The School submission forms part of a wider University submission. The University of Hertfordshire (UH) and the individual STEMM schools are committed to the benefits of the Athena SWAN agenda for all staff, not just women. We plan to continue to work with the University and STEMM schools in this endeavour, and to share experience and knowledge as the Athena SWAN initiative progresses.

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

The School SAT will continue to meet quarterly to discuss and progress the action plan, and review team membership. The team will have the responsibility of implementing the actions, monitoring, evaluating, and addressing any issues. We will also obtain updated data, conduct new data analysis, continuously consult with staff, modify the plan when necessary, and plan our submission for the Silver award.

Dr Doolan as the School Athena SWAN champion will report progress on actions to the University's central SAT **(Action: 1.3)**. The Central SAT reports to the University Research Committee and the Senior Executive Group. At School level the Associate Dean sits on the School's Executive Group and Athena SWAN will be a standing item on the weekly agenda. We also intend Athena SWAN to be an agenda item at the School's monthly "News and Views" meetings, in order to keep all staff updated and engaged, and maintain the visibility of the Athena SWAN agenda **(Action 1.4)**. The submission, including action plans, will be made visible on the School's website which is linked to the wider University website. These initiatives will ensure that Athena SWAN maintains momentum within the School and beyond.

Action 1.1: Continue to consult with Professor Clark and set up the EPSRC/Athena SWAN Workshop.

Action 1.2: Attend British Computer Society Athena SWAN event in London and report back to School.

Action 1.3: School Athena SWAN CS SAT group to report to UH SAT.

Action 1.4: Include Athena SWAN item on School's News and Views meetings.

Word Count: 1000 words

3. A picture of the department: maximum 2000 words

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

The School of Computer Science is one of the oldest computer science departments in the UK. Computer Science has been taught on the College Lane campus since 1956. The School comprises 56 academic staff of which 36% are female. Female representation has increased from 28% in 2012 to 36% in 2014. This proportion of women compares well against the sector where women represented 21.7% of staff in IT and Systems Sciences (ECU, 2013). There are 30 research staff (20 male, 10 female) and 9 female administrative staff. We have 63 PhD students enrolled, 47 male and 16 female (**Action 3.1** discussed below). The school does not have its own technical staff; computing support for schools is university wide.

The school has three National Teaching Fellows (2 female, 1 male) recognised for excellence in learning and teaching. World-leading research in the areas of Adaptive Systems, Algorithms, Bio-computation, and Compiler Technology and Computer Architecture takes place within the School's Centre for Computer Science and Informatics Research (CCSIR).

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

Student data

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

The School does not currently offer any access or foundation courses.

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

A comparison with benchmarking data suggests that female students on our **full-time** courses are on par with national student numbers (Figure 1): the percentage of female students on our full-time undergraduate courses has ranged between 13%-16% in 2010-2013 with the national percentage (for Computer Science) in 2011-12 being 15.7% (ECU). Numbers on our **part-time** courses shows a dip in female representation from 20% in 2010-11 to 6% in 2011-12. Female representation recovered in 2012-13 and was at 14% (due to an increase in female and a decrease in male numbers). ECU benchmarking data indicates that in the academic year 2011-12 female representation on our undergraduate part-time courses (6%) was substantially below the national average for that year (20.3%). We do not have benchmarking data for 2011-12 although it is encouraging that our numbers have increased. The low number of female students on our undergraduate programmes in Computer Science is something we are committed to address by monitoring **(Action 2.1)** and by focussed action **(Action 4.3, 4.4).**

The School offers a range of full-time and part-time courses including a single subject Computer Science BSc, with an optional specialism (Networks, Artificial Intelligence or Software Engineering) and a BSc in Information Technology. Both pathways provide students with opportunity to study abroad. 2014-15 is the first year of our new BSc undergraduate programme. Our first year Human Dimensions module (mandatory on all programmes) includes sessions covering pioneering women in Computer Science. Over the past year (2014) we have already taken action to ensure that females figure prominently on our marketing materials and websites, and we will continue to increase their visibility (**Action 3.1)**. The school has given prominence to female students in our promotional material (for example females figure prominently in our video at: http://www.youtube.com/watch?v=Xevx1uy4YYw) and we include female testimonials on the School website. On our school marketing pop-up banners we focus on female students, and images of female students and staff feature in our printed promotional material including course booklets and posters.

The 36% of Computer Science academic and research staff who are female act as role models for our female students, and internationally excellent research undertaken by females is showcased on our website. Colleagues of both genders engage in outreach activities. Our School Student Representative Officer (SRO), who liaises between staff and student representatives, is a female student. Of the 15 student representatives, 6 are female and 9 are male. We also have 6 student ambassadors (2 male and 4 female) who work with staff to improve the student experience and help at open days to encourage both male and female students to study with us. Photographs of student representatives and ambassadors are displayed in a prominent position at the Computer Science reception. We acknowledge under-representation of females studying Computer Science as a sector wide issue and understand that more work must be done to encourage female undergraduate students to study with us. We shall monitor whether our actions increase the numbers of female applications **(Action 2.2),** and will add more actions if required.

Table 1: % Male and female students on Undergraduate courses

	Full time & Sandwich Undergraduate				benchmark	Part-time time Undergraduate				benchmark
	Female	Male	Total	% Female	% Female	Female	Male	Total	%female	% Female
2012/13	110	723	833	13%	15.7%	14	86	100	14%	20.3%
2011/12	142	739	881	16%		7	119	126	6%	
2010/11	94	638	732	13%		30	122	152	20%	

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

The School offers a range of specialist MSc degrees (Artificial Intelligence with Robotics, Networking Principles and Practice, Software Engineering) and more generalist MSc Advanced Computer Science. We also offer an online distance learning master's programme. As with undergraduate students, females are in the minority: in 2010 female representation on full-time postgraduate taught (PGT) courses was 20%, in 2011-12 it was 17% and in 2012-13 it was 14%, a gradual decline. Male numbers on full-time PGT courses have also declined over this time, but at a lower rate. Available benchmarking data for full-time PGT Computer Science courses (2011-12) is 22.4%, which suggests our numbers are below national average, though we plan to access more recent

benchmarking data once it is available (**Action 2.2** mentioned above). **Part-time** data shows an increase in female representation from 14% (2010-11) to 20% (2011-12), with a drop to 12% in 2012-13 mainly due to a sharp increase in part-time male student numbers (from N=35 in 2011-12 to N= 72 in 2012-13). We will continue to monitor student numbers. As previously discussed, we will also continue to increase visibility of female staff and graduates in promotional activities **(Action 3.1)**.

Table 2: % Male and female students on Postgraduate (taught) courses

	Full time & Sandwich Postgraduate (taught)				benchmark	Part-time time Postgraduate (taught)				benchmark
	Female	Male	Total	% Female	% Female	Female	Male	Total	%female	% Female
2012/13	19	121	140	14%	22.4%	10	72	82	12%	__
2011/12	33	162	195	17%		9	35	44	20%	
2010/11	56	230	286	20%		15	93	108	14%	

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

Data shows a gradual increase in female representation on **full-time** research degrees. In 2010-11 19% of the student body was female, in 2011-12 this rose to 23% and in 2012-13 to 34%. This is due to a sharp increase in female numbers in 2012-13 (from 7 to 11) and a slight decrease in male numbers (from 23 to 21). Benchmarking data for 2011-12 was 24%, which shows us on a par, and now potentially exceeding, the national average, though we would need more recent benchmarking data to confirm this. Female representation on part-time research programmes has remained relatively steady, with 33% of the students being female in 2010-11. This decreased to 23% in 2011-12, and in 2012-13 it rose to 27%. These figures are above the national average for 2011-12 which was 24%. We plan to continue to monitor these healthy figures (**Action 2.1)** and take action to ensure that they remain high. We will work with the University to introduce postgraduate open days which will include female role models **(Action 4.1)** and give talks to our third year UG students to introduce them to postgraduate study opportunities (PGT and PGR); these session will be followed by drop-in sessions hosted by female members of staff (**Action 4.2).**

Table 3: Postgraduate Research – Registered Students (Full-time/Part-time)

	Full time Postgraduate (research)				benchmark	Part-time time Postgraduate (research)				benchmark
	Female	Male	Total	% Female	% Female	Female	Male	Total	%female	% Female
2012/13	11	21	32	34%	24%	4	11	15	27%	24%
2011/12	7	23	30	23%		3	10	13	23%	
2010/11	6	25	31	19%		4	8	12	33%	

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

A slightly higher proportion of women than men are made offers on the **undergraduate** programme: in 2012-13, 81% of the female applicants and 77% of the male applicants were made

offers. This is generally consistent with the previous two years. In addition, a higher percentage of women than men are accepting offers (52% and 39% respectively in 2012-13). The School will continue to give prominence to female students in our promotional materials **(Action 3.1)** and will undertake research to understand why females choose to study with us in order to inform future actions **(Action 4.3)**.

Table 4: Ratio of Undergraduate course applications to offers and acceptances

Year	Gender	Applications	Offers	Acceptances	Applications to Offers	Offer to Acceptances	Applications to Acceptances
2012-13	F	348	281	147	81%	52%	42%
	M	1611	1234	487	77%	39%	30%
2011-12	F	349	275	181	79%	66%	52%
	M	1441	1109	557	72%	50%	36%
2010-11	F	293	238	150	81%	63%	51%
	M	1504	1023	535	68%	52%	36%

A consideration of course applications, offers, and acceptances on the **postgraduate taught** programme shows that in 2012-13, 76% of female applicants, and 81% of male applicants, were offered a place. These figures were almost identical for the previous year. While the differences between the genders is too small to warrant immediate concern, in the light of our female student numbers on these taught courses, these figures need to be monitored **(Action 2.1)** to ensure that there is no bias in the admissions process. In response to this, all members of staff on decision-making committees and panels will attend unconscious bias training **(Action 7.1)**.

Table 5: Ratio of Postgraduate Taught applications to offers and acceptances

Year	Gender	Applications	Offers	Acceptances	Applications to Offers	Offer to Acceptances	Applications to Acceptances
2012-13	F	137	104	31	76%	30%	23%
	M	607	489	166	81%	34%	27%
2011-12	F	134	102	35	76%	34%	26%
	M	590	471	194	80%	41%	33%
2010-11	F	245	137	65	56%	47%	27%
	M	947	467	221	49%	47%	23%

A consideration of applications for research degrees shows a considerable variation in the number of applicants each year. In all three years considered, a higher proportion of female than male applicants are made offers, and a higher proportion accept. For example, in 2012-13, 23 females (as against 62 males) applied for a postgraduate research degree place. 22% of the female applicants were made offers against 17% of the male applicants. In the previous year, there were considerably

fewer male and female applicants (5 female and 25 male) which resulted in 3 females (60%) and 8 males (32%) being made offers. We will continue to monitor these figures **(Action 2.1)**.

We have already planned measures to attempt to increase our female applications. As discussed above, these include a talk to final-year UG students to familiarise them with our postgraduate degrees in Computer Science followed by drop-in sessions for those who prefer a one-to-one environment to discuss postgraduate opportunities. We will work with the University to instigate a postgraduate open day.

Table 6: Ratio of PG Research degree applications to offers and acceptances

Year	Gender	Applications	Offers	Acceptances	Applications to Offers	Offer to Acceptances	Applications to Acceptances
2012-13	F	23	5	5	22%	100%	22%
	M	62	11	11	17%	100%	17%
2011-12	F	5	3	3	60%	100%	60%
	M	25	8	8	32%	100%	32%
2010-11	F	19	5	5	26%	100%	26%
	M	129	22	18	17%	82%	14%

Action 2.1: Continue to monitor and benchmark student numbers (UG, PGT, PGR) and benchmark with recent benchmarking data when available.

Action 2.2: Continue to monitor student applications, offers and acceptances on all existing and new courses to assess whether our actions have made a difference.

Action 3.1: Continue to increase the visibility of female staff and graduate in promotional activities.

Action 4.1: Ensure postgraduate open days include female role models.

Action 4.2: Coordinate talks to 3rd year UG students to introduce them to postgraduate study opportunities; to include post-talk drop-in sessions hosted by female academics.

Action 4.3 Undertake research to understand why females have chosen to study with us/why specific courses are attractive to inform future actions and help to inform how to attract more female students.

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

Results for Male and Female undergraduate students in Computer Science (Table 7) reflect comparability across the grades from a percentage perspective. We will continue to monitor attainment by gender **(Action 2.3).**

Table 7: Undergraduate Degree Classification

	Gender	First	2:1	2:2	3rd	Pass/Non-hons	Total
2012-13	F	30 (32.6%)	27 (29.4%)	22 (23.9%)	5 (5.4%)	8 (8.7%)	92
	M	98 (31.2%)	102 (32.5%)	71 (22.6%)	12 (3.8%)	31 (9.9%)	314
2011-12	F	35 (28%)	40 (32%)	29 (23.2%)	7 (5.6%)	14 (11.2%)	125
	M	88 (26.1%)	113 (33.5%)	81 (24%)	27 (8%)	28 (8.3%)	337
2010-11	F	38 (24.2%)	61 (38.9%)	36 (22.9%)	7 (4.5%)	15 (9.6%)	157
	M	80 (22.3%)	130 (36.2%)	93 (25.9%)	21 (5.9%)	35 (9.7%)	359

The award results for MSc students (Table 8 below) show slightly better results at distinction level for males during the past two academic years (2011-12 and 2012-13), although this gap has narrowed from 8.5% in 2011-12 to 2.7% in 2012-13. This trend is encouraging and we will continue to monitor these results **(Action 2.3).**

Table 8: Master Awards

	Gender	Distinction	Commendation	Other	Grand Total
2012-13	F	5 (23.8%)	10 (47.6%)	6 (28.6%)	21
	M	31 (26.5%)	50 (42.7%)	36 (30.8%)	117
2011-12	F	6 (19.4%)	14 (45.2%)	11 (35.5%)	31
	M	31 (27.9%)	40 (36%)	40 (36%)	111
2010-11	F	6 (30%)	6 (30%)	8 (40%)	20
	M	33 (28.7%)	36 (31.3%)	46 (40%)	115

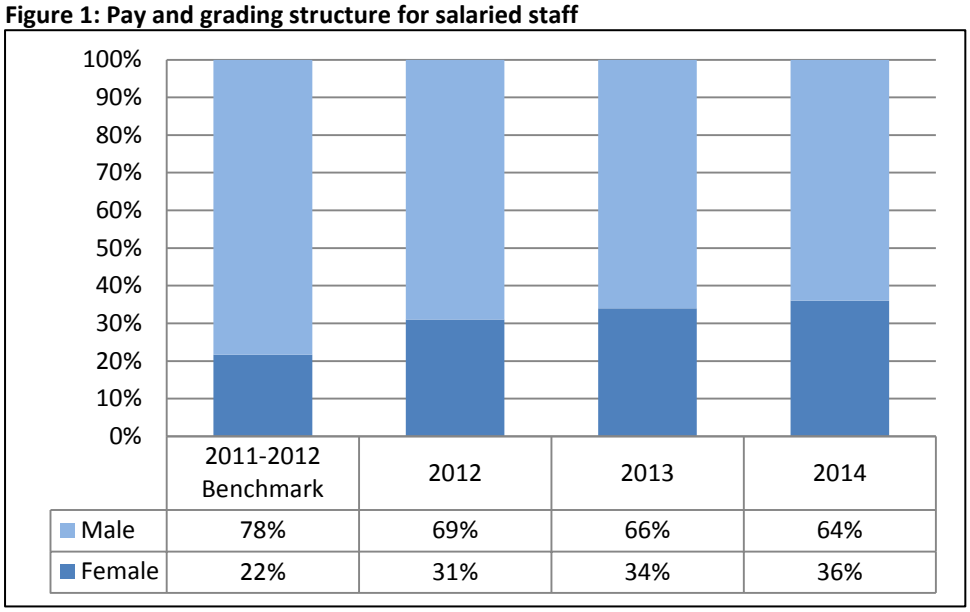
Action 2.3: Continue to monitor student degree classification**.**

Staff data

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

Figure 1 below shows that the proportion of female academic staff has increased from 31% in 2012, to 34% in 2013 and 36% in 2014. These figures are healthy compared to national figures (21.7% of staff on 'IT and Systems Sciences, Computer Software Engineering' in 2011-12). We will continue to monitor these figures and benchmark them against more recent data when available (**Action 5.1).**

Figure 1: Pay and grading structure for salaried staff



	2011-2012 Benchmark	2012	2013	2014
Male	78%	69%	66%	64%
Female	22%	31%	34%	36%

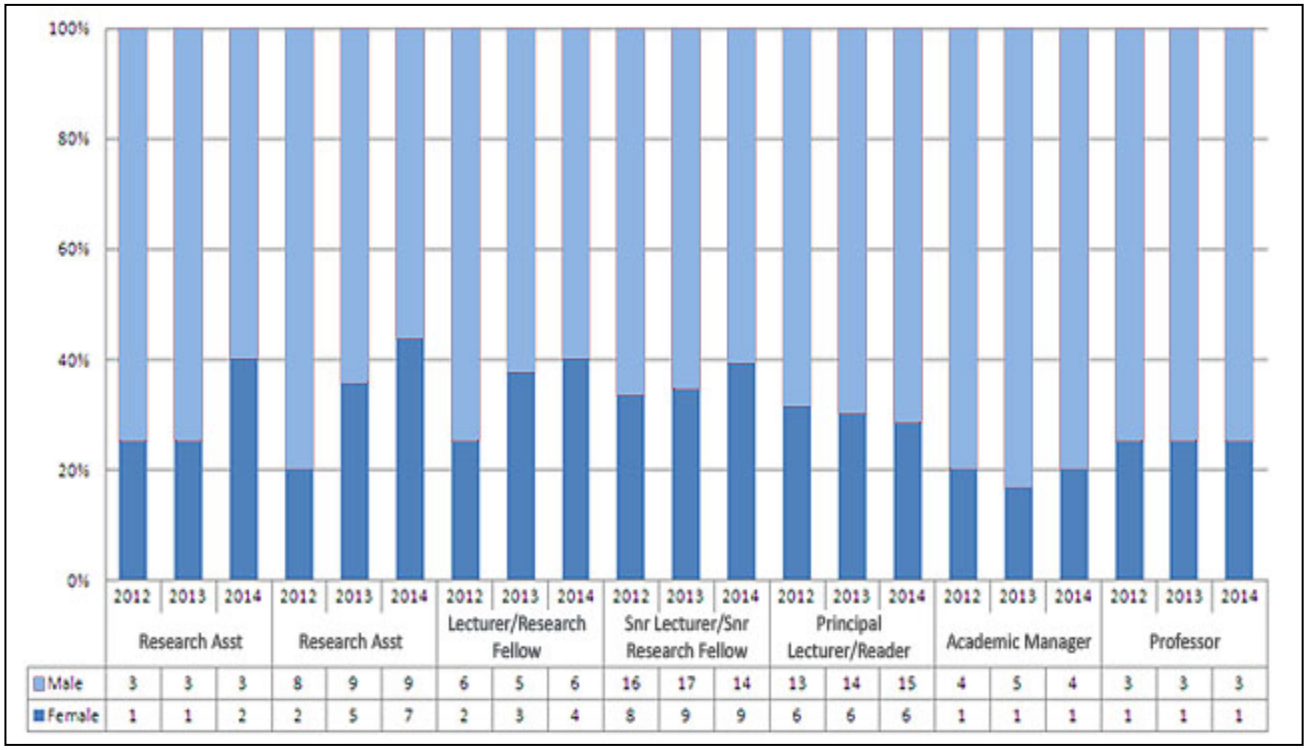
The pay and grading structure within the University of Hertfordshire for Academic Staff is illustrated in Table 9 below and covers grades UH7-UH9 on the national pay spine and an incremental Academic Manager/Professor pay and grading structure above UH9. The grading structure for academics encompasses both teaching and research contracts. Research posts cover grades UH4 and above and academic posts cover grade UH7 and above. All roles on the UH grading structure, including Academic Manager/Professor, are subject to evaluation and periodic review to ensure consistency and transparency.

Table 9: Pay and grading structure for salaried staff

	Teaching and research	Research focus
Academic Manager/Professor	Academic managers inc. Deans of School/ Associate Deans	Professor
UH9	Principal Lecturer	Reader
UH8	Senior Lecturer	Senior Research Fellow
UH7	Lecturer	Research Fellow
UH6		
UH5		Research Assistant
UH4		

The data in Figure 2 below shows under-representation of females at the senior grades. Currently at the lecturer grade 75% of staff are female, at the senior lecturer grade there are 41%. This drops to 29% at Principal Lecturer/Reader level, and to 20% at the Professorial and Academic Manager (e.g. Dean, Associate Dean) level.

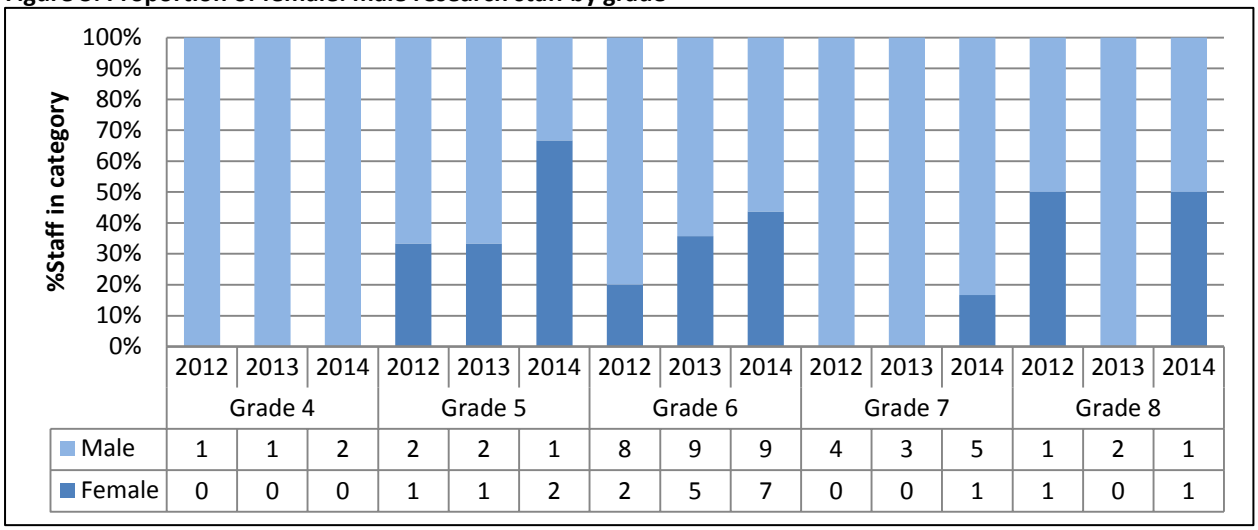
Figure 2: Proportion of female: male academic and research staff by type of post



Currently, staff self-select for career development opportunities and promotion. Traditionally women are less likely to do so than their male counterparts, and we need to understand why this is happening. Specific actions relating to promotion and career development will be discussed in detail in Section 4.

The proportion of research staff within the school has grown during the last three years with an increase of 5 staff each year (Figure 3). Female representation is lower at grades UH7 and UH8. We shall identify research staff (at appraisal) for promotion to grade UH7 and beyond **(Action 6.2)**.

Figure 3: Proportion of female: male research staff by grade



	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
	Grade 4			Grade 5			Grade 6			Grade 7			Grade 8		
Male	1	1	2	2	2	1	8	9	9	4	3	5	1	2	1
Female	0	0	0	1	1	2	2	5	7	0	0	1	1	0	1

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

The turnover rate (excluding ending of fixed term contracts) for male staff currently stands at just under 11%, almost three times the corresponding turnover rate for females. The School general manager responsible for staffing conducts exit interviews: staff turnaround is generally based on retirement.

The number of academic staff leaving is low, with predominantly male staff involved in staff turnover in 2013 and 2014. In 2014, 16.1% of male staff left the institution as against 6.7% of female staff. This could be consistent with a greater proportion of male staff being employed on fixed term contracts relative to female staff. Research staff who left during the past three years did so as projects came to an end and their contracts expired.

Table 10: Proportion of female: male academic/research staff by gender

Year	Gender	N staff	leavers	leavers due to end of fixed term contract	turnover rate (all)	Turnover rate of fixed term	turnover rate excluding fixed term
2012	F	21	2	1	9.5%	4.8%	4.8%
	M	53	5	2	9.4%	3.8%	5.7%
2013	F	26	0	0	0%	0%	0%
	M	58	6	2	10.3%	3.4%	6.9%
2014	F	30	2	1	6.7%	3.3%	3.3%
	M	56	9	3	16.1%	5.4%	10.7%

The CCSIR recruits postdoctoral researchers from leading institutions world-wide. The number of postdoctorals (approximately 20, and 63 PhD students) is complemented by the presence of experienced staff members, ensuring a culture of vitality and sustainability. The strength of our staff support, and the excellent training that our postdoctoral researchers receive, is reflected by their destinations when they leave us.

Action 6.2: Identify researchers (at appraisal) for promotion at grade 7 and grade 8 for research staff in consultation with the Dean.

Word Count: 1999 words

Supporting and advancing women's careers: maximum 5000 words

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

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

Recruitment data is only stored for 18 months due to compliance with the Data Protection Act. In order to address the lack of long term data, application and success rate data will be processed on an annual basis, and the metadata stored in the UH Athena SWAN Office**.**

Findings show that the number of male applicants was more than three times the number of female applicants for 2014 and double the number of female applicants in 2013. In both years a greater proportion of female than male applicants are shortlisted. This resulted in more female applicants obtaining employment than male applicants in 2013, but more male than female applicants in 2014. Findings show that a substantially higher proportion of women shortlisted were offered employment than men in 2013: 83% of females shortlisted and 44.4% of males shortlisted were offered employment. In 2014, a slightly higher proportion of males shortlisted (28.6%) were offered employment than the proportion of females shortlisted (25%). These findings do not suggest that there is an inherent gender bias in the shortlisting and selection process. However, we will continue to monitor these figures **(Action 5.1).** Further actions relating to the recruitment process will be discussed in the next section.

Table 11: Job application and success rates by gender and grade

	applied	**shortlisted**	**Successful**	**% successful if shortlisted**
2014 Total	**57**	**18**	**5**	
Female	12 (21%)	4 (33.3%)	1 (8.33%)	25%
male	45 (79%	14 (31.1%)	4 (8.88%)	28.6%
2013 Total	30	15	9	
Female	10 (33%)	6 (60%)	5 (50%)	83.3%
male	20 (67%)	9 (45%)	4 (20%)	44.4%

Action 5.1: Continue to monitor staff figures (including application figure and success rates) and benchmark with more recent benchmarking data when available.

(ii) Applications for promotion and success rates by gender and grade

Members of the School can apply for positions advertised for Senior Lecturer, Principal Lecturer, Associate Dean and Dean. Alternatively, staff can undergo an objective job evaluation process (Equate) within HR. This process involves the member of staff showing evidence that their duties and responsibilities are within a higher grade to their current one. This process is discussed during the appraisal process with the line manager, alongside promotion opportunities and action plans. This is assessed by HR staff before being approved by the accountable Pro Vice-Chancellor, to ensure consistency across the University.

In 2010 the University moved to an online recruitment system to manage all internal and external applications to vacancies. Applicant data is retained within the HR system for 6 months after which a restricted subset of anonymised data is downloaded to excel spreadsheets on a monthly basis to enable University level monitoring. Currently, full data sets for the past 3 years are not available. Data analysis has been undertaken with the available data. To enhance School level analysis in the future, the University now plan to identify, assess and implement improvements to recruitment and selection data retention and analysis practice.

Table 12 below shows that the progression through the Equate system has been predominantly undertaken by males (80%) with just one female progressing. 80% of progressions are from a Research Fellow to Senior Research Fellow with just one case (male) progressing one grade at Senior Lecturer level. The EQUATE process is discussed with members of staff at appraisals. However the Dean will further highlight to line managers the importance of encouraging individuals to apply for promotion through the EQUATE system and discuss the process with them in more depth **(Action 6.1).**

Table 12: Equate Data for period 2013 -2014 – Promotions and Success Rates by gender and Role

Count of staff number	Female	Male	Grand Total
2013	**0**	**4**	**4**
Promoted	**0**	**4**	**4**
Research Fellow	0	3	3
Senior Lecturer	0	1	1
2014	**1**	**0**	**1**
Promoted	**1**	**0**	**1**
Senior Research fellow	1	0	1
Grand Total	**1**	**4**	**5**

Promotion to Reader and Professor is through varying routes including: research, learning and teaching, commercial and management and applicants may apply through the submission of a body of evidence at any time throughout the year. As shown in Table 13 below, the procedures have resulted in 2 female Readership awards in 2010, two male Readerships in 2013, one male professorship in 2014 with one female professorial application in process. All staff that have the potential and desire to achieve promotion to readership or professorship will be identified at appraisals and a plan of action will be put in place accordingly in consultation with the Dean **(Action 6.2).** All individuals who have been successful in achieving readership and professorship will be interviewed to better understand how to help those who wish to progress and to understand any

obstacles or barriers to promotion (**Action 6.3).** HR is developing guidance on progression pathways, and will introduce workshops to give support to those considering making an application for progression.

Table 13: Promotions to Reader and Professor

Count of staff number	Female	Male	Grand Total
2010	**2**	**0**	**2**
Promoted	**2**	**0**	**2**
Reader	2	0	2
2013	**0**	**2**	**2**
Promoted	**0**	**2**	**2**
Reader	0	2	2
2014	**1**	**1**	**2**
Promoted	**0**	**1**	**1**
Professorship	0	1	1
In process	**1**	**0**	**1**
Professorship	1	0	1
Grand Total	**3**	**3**	**6**

Action 6.1: Highlight and explain the EQUATE promotion process to appraises.

Action 6.2: Identify individuals (at appraisal) who wish to achieve Reader or Professorial status and put a plan of action together for them in consultation with the Dean.

Action 6.3: All individuals who have been successful in achieving readership and professorship will be interviewed to better understand how to help those who wish to progress and to understand any obstacles or barriers to promotion.

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

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

The University has strict policies on recruitment and selection. All those involved in recruitment attend training and this is mandatory. All colleagues on decision-making committees and panels will undergo unconscious bias training **(Action 7.1).** HR assists the School in the recruitment and selection process and ensures that these are aligned with the University's Recruitment policy. The interview panel has at least one female on the panel when women are being interviewed. Our HR contact oversees the process and ensures that the University's Equal Opportunities Employment policy is implemented. We have a series of actions in place to ensure females are attracted to apply for posts within our school. More specifically, we plan to make sure that all job adverts include the following information: our School supports flexible working; all meetings take place

within what we consider to be core working hours (9.30-3); a number of colleagues make use of the on-campus nursery; the school provides training for new members of staff and offers a solid induction process **(Action 8.1)**.

Action 7.1: Unconscious bias training for colleagues on decision making committees.

Action 8.1: Include family-friendly information on job adverts.

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

Personal Development training

A wide variety of CPD courses are offered to all members of staff (academic and professional) by the UH Professional Development Unit. These range from 'Excel' workshops and time-management workshops through to leadership training schemes. Some of the courses are mandatory dependent on role such as 'recruitment and selection'. Staff within the School are alerted to these opportunities via email. However, we think that a more targeted approach highlighting these opportunities is required **(Action 6.4).**

Further UH events have included a workshop on '*Career progression for Researchers*' which was held as part of the '*Excellence in Research Conference'* on the 25th of September 2014. One female PhD student presented the research undertaken in the School and one female member of the academic staff conducted a mentorship workshop.

One female in the School has been selected from across the university to attend the Aurora Programme for Women into Leadership, designed to address the under-representation of women in senior HE positions. This individual has offered to present her experiences of the course to help encourage other women who are interested in managerial positions to consider applying and attending the programme (**Action 6.5).** Two females have achieved a Doctorate in Education having undertaken study in the School of Education at UH. This was encouraged by their respective line managers and funded by the School.

Action 6.4: Highlight and promote UH development (CPD) opportunities to female members of staff during appraisal and school events.

Action 6.5: Present experiences of the Aurora Leadership Foundation Programme to help encourage other women who are interested in managerial positions to consider applying.

The Researcher Development Programme (RDP)

The RDP provides a professional development framework for planning, promoting and supporting the personal, professional and career development of researchers. A programme of workshops runs throughout the year to provide support for researchers. The CCSIR within the school has long-standing internal procedures for research staff career development. Generous research allocations (typically 70% of staff time) are given to 'new-blood' appointments in the key research areas; these are usually limited to an initial three years, after which the staff member has to provide evidence of sufficient research output and external funding to maintain the research allocation. Annual appraisal within the School provides an opportunity to reflect on research progress and, with a senior member of staff, formulate future plans.

Mentoring

Mentoring is implicit in the appraisal process however; we recognise the need for mentoring and career development to be made explicit. The University is in the process of developing a mentoring programme for research staff so that it more explicitly supports women in advancing their careers in STEMM.

A mentor is assigned to a new member of staff for a 6 month probationary period. We currently have no formal mentoring scheme within the School. As outlined in section (b), Sylvia Beka and Dr Yi Sun, members of the CS SAT, sit on the Researcher Development Working Group and as part of the Athena SWAN initiative we are working with this group, HR and others to implement a mentoring scheme in the school for both male and female staff to support staff with their career trajectory. Following the School away day which focused on Athena SWAN, our ideas on how best to do this are evolving **(Action 6.6).**

Networking

There are numerous planned and ad-hoc networking opportunities for staff. All staff are members of the British Computer Society (BCS) and women participate in the BCS women groups; others are involved with the ACM and in the process of developing an ACM Women's professional chapter across the UK to help build a network and host events to promote more female participation in software engineering. We will continue to promote and raise awareness of BCS Women, ACM Women, Lovelace Colloquium and other initiatives (staff and students) **(Action 6.7)**.

Within our school on a weekly basis we hold the research colloquium, this provides an opportunity for all staff, including research active staff and students, to come together to learn and share research. Research groups within the school and university-wide also provide events as a means to network. Further, the staff room provides a forum for networking on an informal basis. We plan to invite influential women speakers to present at events such as the researchers colloquium and Computer Science at 50 anniversary event **(Action 6.8)**.

Career development

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

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

Although the response rate was low (36 staff) 70% of those who responded to the school flexible working survey conducted as part of the Athena SWAN submission, reported that the school has supported them with their career development. The overarching comments include *"Mainly by informal support from colleagues"*," *I feel that I receive excellent support and encouragement from my colleagues and my line manager (the Associate Dean Research)"* and*" I have a good relationship with my line manager who is very supportive of publishing and career advancement in general".* However, a number of comments related to the lack of time to undertake training, the overreaching comments include *"I do not have enough internal support to lead my research area" "Training or the obtaining of qualifications is typically over and above normal duties". "As a carer, it is difficult to find any of your own time that you are able to give up to undertake such staff development*" and "*Significantly less help given during the last three years".*

We will conduct research across the school to ascertain career development needs and support required by staff so that we can put in place the necessary measures to help staff in their career development **(Action 6.11)**.

Promotion and Career Development

All staff participate in an annual appraisal with their line manager and reviews take place every six months. It is mandatory for line managers to attend appraisal training. The appraisal process provides an opportunity for all staff to engage in a dialogue about work priorities and personal and professional development needs which includes promotion and career objectives. Staff who are predominately research active are line managed by those who are also research active, those on an externally funded projects are managed by the Principal Investigator, who is their line manager and hence appraiser. A recent School initiative is to ask all line managers to review at appraisal when the member of staff last attended Equality & Diversity Training and encourage all members of staff to attend such training (which is compulsory for all new members of staff). This is currently still in process (**Action 7.2).**

To support the career development of researchers, in April 2010, the university launched the Concordat and later in the same year we were one of the first universities to receive the European Council HR Excellence in Research Award. We received external re-approval of the Award after its two-year review in 2012. Under the Concordat's aegis, within the CCSIR School researchers have opportunities for training and career development. All research staff are given central and local induction and are encouraged to access the academic staff development programme as well as the Researcher Development Framework.

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

The university provides a comprehensive induction process which consists of a central induction event and an Equality and Diversity training event. The former gives the new members of staff the opportunity to meet contacts from key services and departments within the university, including HR and the Office of the Vice Chancellor. The Equality Training event consists of an online module and a half-day training session hosted by the Head of Equality at UH. We also provide a local induction event within the School which is organised by line managers with guidelines provided by HR. Additionally, the executive assistant to the Dean inducts new staff to the technical infrastructure. All new members of staff are encouraged to access 'Staffnet', the UH online portal where staff can book CPD sessions. This, too, houses the University Policy Regulations i.e. induction, career, research and learning and teaching information.

For Research Staff, separate and specific local induction guidelines and checklists are in place. This includes an introduction and training on RIS (Research Information System), an overview and meetings with the Research Grants Team and details on research ethics procedures at the University.

All staff have access to a School-based staff handbook. This handbook was updated in October 2014 so that it contains information on family-friendly policies including flexible working, maternity and paternity leave, keeping in Touch day (KIT) and breastfeeding facilities.

The School conducts peer observation of teaching and other related activities; this is an opportunity to gain feedback from peers and to ascertain staff development needs. The School's Learning and Teaching Forum is an arena to share and promote best practice with colleagues and is an opportunity to network with colleagues.

Other opportunities for networking for all new staff are available during local and central induction and their associated workshops, as well as subsequent training and development workshops and school events such as seminars. For example, the schools research colloquium on Wednesdays with refreshments presents a networking opportunity for all. Staff receive emails of the events in advance and reminders leading up to the event. Events are also visible on the Schools website.

Professional and personal development opportunities, networking and social events from the University are disseminated to staff through central mailing lists. All new staff are supported to complete the PgCert in Higher Education qualification; time taken for studying (which leads to FHEA; Fellow of the Higher Education Authority) is included in the workload for staff. The University runs development workshops and events on an almost daily basis, which includes lunchtime training sessions for Researchers and other longer sessions on communication and personal development, equality and diversity, health safety and wellbeing, Learning and Teaching and Commercial/business development. These workshops and events are openly advertised to all members of the school, and staff are encouraged to attend by choice.

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

Academic staff in the school regularly provide mentoring and additional supervision to students and at times this results in students winning awards. Recently, a female final year BSc undergraduate student received a Flare Ignite award for her project on a video security system using a Raspberry PI. The student won prize money, commercial mentoring and entrepreneurship support. Flare is the University of Hertfordshire's competition to help students and alumni launch new businesses or develop an innovative idea. The competition culminates in a gala awards dinner at which the finalists are presented with their prizes and the audience learns about their business or innovation.

Female students may choose to have a female personal tutor and receive extra support during pregnancy. Research students are supported in the transition to teaching through the CPD provided institutionally. It is mandatory for students who wish to teach to attend the relevant modules. All engage in peer observation intended to provide feedback on best practice and to highlight development needs. Further support is provided by supervisors. Students are also invited to attend the Learning and Teaching Forum which presents an opportunity to discuss and share learning and teaching practice alongside experienced staff. Student ambassadors which are recruited centrally are paid to undertake duties on behalf of the school such as participation at open days. Extracurricular experience and involvement in School operations is encouraged in a variety of ways, such as student representation on decision making committees for example, the BSc and MSc and the Athena SWAN group.

Action 6.3: Further highlight and promote UH development (CPD) opportunities to female members of staff.

Action 6.6: Ascertain further ideas from staff and students re: Mentoring Scheme (feed into the university process).

Action 6.7: Continue to promote and raise awareness of BCS Women, ACM Women, Lovelace Colloquium and other initiatives to staff and students**.**

Action 6.8: Invite influential women speakers to present at events such as the researchers colloquium and Computer Science at 50 anniversary event.

Action 6.11: We will conduct research across the school to ascertain career development needs and support required by staff so that we can put in place the necessary measures to help staff in their career development.

Action 7.2: Line Managers to review at appraisal when the member of staff last attended Equality & Diversity Training and encourage all members of staff to attend such training.

Organisation and culture

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

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

All committee and group membership shown in Table 14 is dependent on role. Female representation on the School Executive Group has dropped from 33.3% (two females) in 2012-13 to 16.7% (one female) in 2014-15 as we currently have one female Associate Dean (Learning and Teaching). We expect to see an increase in female representation at senior School committees once a higher proportion of women in the School are promoted as membership is dependent on role.

Table 14: Decision-making committees

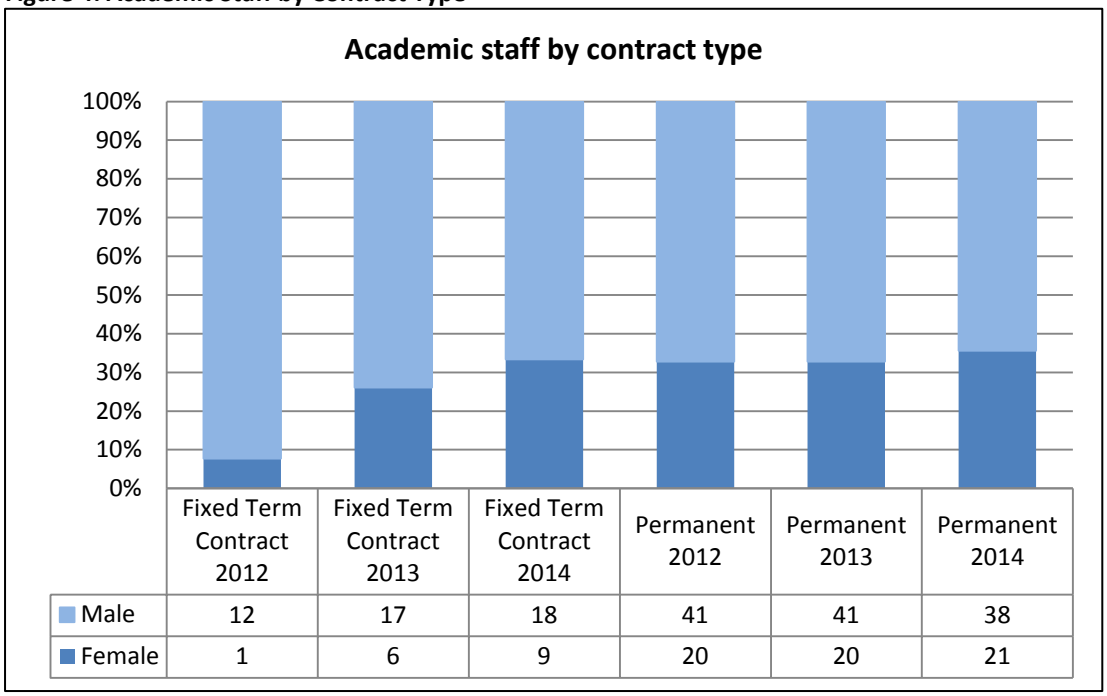
	Chair (male/female)	Number of members	Composition of Committee M:F	Number of meetings per year	Type of Committee
School Committees/Groups					
School Academic Committee	Prof William Clocksin Male	18	12:6	3	The purpose is to monitor and provide assurance to the Academic Board. The committee discharges responsibilities of research and quality of all aspects of UH education provision.
School Executive Group	Prof William Clocksin Male	10	7:3	48	This is a meeting of the School senior management team and takes place weekly. Standing items include Health and Safety, Staffing, Green Impact, Ethics and Risk.
Programme Committee BSC	Dr Austen Rainer Male	50	34:16	3	This committee has overall academic oversight for ongoing development and quality of programmes.
Programme Committee MSc	Ms Lynette Pye Female	24	15:9	3	This committee has overall academic oversight for ongoing development and quality of programmes.
Research Leaders Group	Prof Bruce Christianson Male	11	7:4	20	This is a meeting of the Research leaders to discuss progress and share ideas and takes place once a fortnight.
Outreach Committees					
Computing 4 Teachers	Dr Austen Rainer Male	6	4:2	12	This is a group which plans how to deliver a 'training for trainers' course to enable teachers to teach basic programming skills at schools level 1, level 2 and level 3.

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

The School employs both males and females on fixed-term contracts as shown in Figures 4 and 5. Nearly all these contracts are for externally funded research projects. The few fixed-term academic (non-research) contracts are all temporary appointments to cover those permanent members of staff that are on planned academic leave or maternity leave during the year.

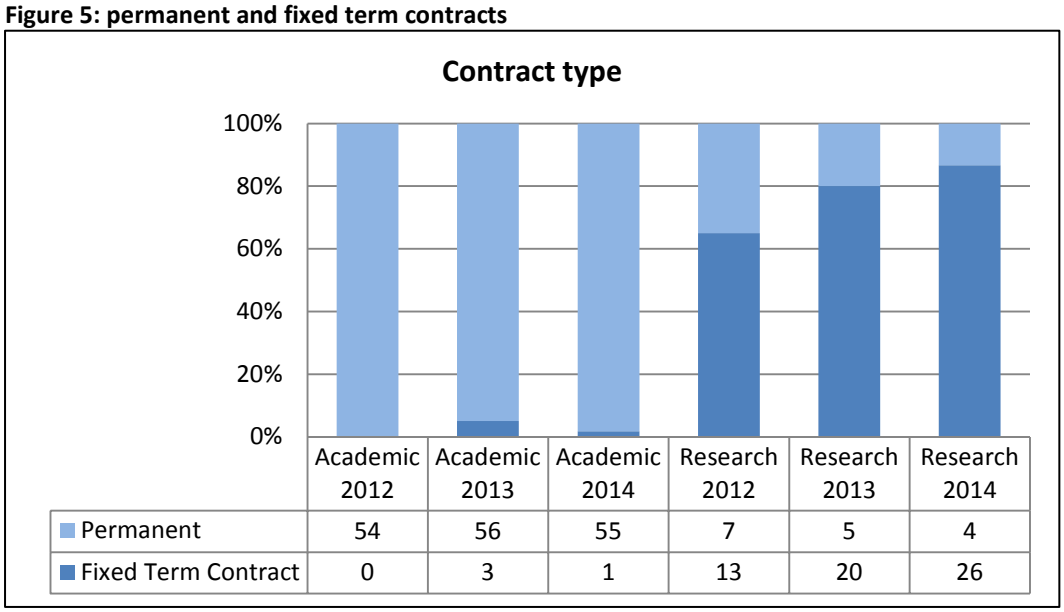
The proportion of female staff on fixed-term academic contracts has risen from just under 10% to just over 30% in the past three years. This increase takes the research teams above the norm for the computer science sector. This growth reflects the School's increasing involvement in the research area of social robotics, which attracts researchers with an experience broader than the traditional engineering background of robotics researchers. Furthermore, two of the School's five REF-counted research groups are led by women, and it is possible that networking opportunities through their participation in international conferences have led to the greater recruitment of women research staff overall. While the School is pleased with a relatively high level of female participation in research groups compared to the sector, the next step is to ensure sustainability and further growth. The School will continue to actively engage with research programmes in Social Robotics, which has been recognised as a key research topic by the European Commission. The School is also encouraging the high visibility of women research leaders by funding their participation in networking and conference activities where possible.

Figure 4: Academic Staff by Contract Type



	Fixed Term Contract 2012	Fixed Term Contract 2013	Fixed Term Contract 2014	Permanent 2012	Permanent 2013	Permanent 2014
Male	12	17	18	41	41	38
Female	1	6	9	20	20	21

Figure 5: permanent and fixed term contracts



	Academic 2012	Academic 2013	Academic 2014	Research 2012	Research 2013	Research 2014
Permanent	54	56	55	7	5	4
Fixed Term Contract	0	3	1	13	20	26

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

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

Addressed in section (a) (i)

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

Staff work allocation is planned in negotiation with the staff concerned and other stakeholders. The details of the allocation are maintained on a web based system visible to all staff that allows staff to comment any issues. Appraisers and appraisees use the work allocation as a basis for their discussion of the previous year and action planning for the following year. Action planning feeds into the work allocation process. Promotion takes place through the Equate process and is informed by the staff work allocation. Large staff responsibilities and those that are seen as good for an individual's career are rotated, for example, the Programme Tutor role on the BSc Computer Science and the BSc Computer Science (online) were both recently rotated.

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

Meetings are generally held between 0930 and 3pm and coincide with the Hertfordshire County Council School term time to ensure inclusivity for individuals with child caring responsibilities. 80% of staff who responded to the school flexible working survey conducted as part of our Athena SWAN submission agreed that the timing of the school meetings is sufficiently flexible. Staff have the opportunity to work from home when they are not required to be on campus. Social gatherings include a Christmas lunch party and other one-off events such as retirement parties which are held during core working hours.

Staff with caring commitments and other requirements complete a form and make these known to the general manager of staffing for consideration when scheduling teaching. The school prioritise caring commitments as constraints on timetabling. However in the past year the university has implemented a centrally controlled timetabling system which means that the school has less control over the actions it takes. However, colleagues within the school work together to accommodate colleagues' teaching commitments.

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

The Computer Science flexible working survey resulted in written narratives and one-to-one discussions being conducted to inform this application. 36 participants took part in the survey of whom 19 (65.52%) Academic Staff (out of a total of 56), 5 (17.24%) Research Staff (out of a total of 30) and 5 (17.24%) Administrative Staff (out of a total of 9) of whom 45% were female, 52% male and 3% preferred not to say. The overarching theme is that the school atmosphere is supportive and inclusive; this is particularly evident amongst colleagues.

90% of staff who responded to the survey, reported that the school is female friendly and inclusive. As one colleague stated "*if somebody needs to run off to hospital due to family emergencies another member of staff will cover your teaching/work with no question*"; another colleague suggested that "*when the chips are down, we rely on our colleagues and they can rely on us*".
The School's physical working environment encourages collegiality. For instance; colleagues' offices are located in close proximity. We also have a staff coffee room fully stocked with coffee and tea provided by the school and this is an excellent space for colleagues to network and catch up on research and teaching related news, mix with research students and engage in general chit chat. It provides a space for our PhD students to meet, many of whom are international, and the environment feels open, warm and inclusive.

Staff tend to stay loyal to their work, colleagues and their students. Many of our staff both male and female have been with the school for a substantial number of years and have received long service awards from the University. Some of this time with us has been spent rearing their families and many have availed of the University nursery facilities.

Training and staff development events, such as the research colloquium, take place over lunch-breaks or early afternoon to fit in with those colleagues who have children of school age. The University nursery is open from 8 am to 6pm for those with younger children and many of our staff use this facility. Our Keep in Touch (KIT) days for those on maternity leave provides colleagues with a sense of inclusivity. Two female members of staff availed of this opportunity.
Our female School Student Representative Officer (SRO) liaises between staff and student representatives. Out of the 15 student representatives, 6 are female and 9 are male. Open door policies are the norm for colleagues and the resounding message is that "students are very welcome". We also have 4 student ambassadors (2 male and 4 female) who work with staff to varying degrees related to the student experience and help at open days to encourage both male and female students to study with us.

The Head of Equality ran a training workshop on Equality and Diversity at our Athena SWAN-focused staff away-day on the 17th of September. This event was organised by the School Athena SWAN champion and served to promote the Athena SWAN activities within the School and the University. In addition, staff responded very enthusiastically to the equality training session provided.

"At a recent staff Away Day there was a session provided to all staff on Equality and Diversity training, hosted by Min Rodriquez (Head of Equality). I found this session one of the most engaging and enjoyable sessions I have been to, in all the sessions that I have attended, at the University".

The format of the last Away Day also included short presentations by three staff on the personal and human side of their career and work. This was so well received that the Dean of School has requested that this format be used for future away days **(Action: 6.9).**

Action 6.9: Continue to use format regarding career presentations at future school away days.

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

The School participates in varying outreach activities with schools, colleges and organisations as shown in Table 15 below. Additionally, the School engages with teachers through our *Computing 4 Teachers* initiative a collaborative project with the School of Education and the University's Science Learning Centre. This is a long-term project to help primary and secondary school teachers, and their schools, prepare for and deliver the new computing curriculum and complements the outreach work at primary and secondary schools, colleges and organisations.

All our outreach activities are conducted by seven academic staff of whom four are male and three are female. Engagement is formally recognised within workload allocations.

In addition to external activities, events are held within the School with services such as the British Computer Society where we host a series of events. For example, in October the Ada Lovelace Day special event took place which was open to the public. Work with marketing on the UH Road Show which is taking place to ensure female representation at every event and we intend to review outreach activities to ensure that male and female representation is equal **(Action 4.4)**. We recently showcased our robot KASPAR at the university nursery to children and their parents to facilitate a link between the nursery and our School. This was a fun day and much appreciated by parents at the nursery. A parent who also works at the university in the School of Life and Medical Sciences commented:

"*The children loved it, and have drawn lots of pictures of KASPAR, and enjoyed interacting with the robot. All the children had a chance to talk with KASPAR, and we plan to do something similar next year. My daughter is now obsessed with robots!*"

Members of the Robotics research group have engaged with 1000+ people in various schools, colleges and organisations between 2012 and 2013. A sample of these activities is presented in Table 16 overleaf.

Table 15: Selection of Outreach Activities (presented by female member of academic staff)

Date	Outreach Activity	To Whom	Where
2012	Careers in IT and how to get there	Students & parents (100+)	Barnet College
2012	Careers in IT and how to get there	Students & parents (100+)	North Herts College
2013	Careers in IT and how to get there	Students & parents (100+)	Stanmore College
2013	Object-Oriented programming	Students and teachers (50+)	Meridian School
2013	Object-Oriented programming	Students and teachers (50+)	Fearnhill School
2014	CPD courses	Teachers	Science Learning Centre Consortium

Table 16: Selection of Outreach Activities relating to Robotics (conducted by a male member of the research group)

Date	Outreach Activity	To Whom	Where
2012	Kaspar presentation & demo	Sixth form students & parents (50+)	Queens School, Bushey
2012	Kaspar talk & exhibition	National Autistic Society professionals (100+)	NAS Conference, Harrogate
2013	Presentation on robotics	School children (50+)	UH Aim Higher
2013	Presentation	General public (200+)	2045 Futurist Symposium, Watford Palace Theatre
2013	Visit with Kaspar robot	School children (30+)	Summer play scheme, St Andrew's School, Hertford
2013	Kaspar presentation & demo	Hertfordshire Engineering Club (20)	Hertfordshire Engineering Club
2013	Demonstration of Kaspar, Charly & Sunflower robots	General public and school children (500+)	Bletchley Park
2014	Kaspar presentation	Hertford Rotary Club exchange programme, secondary school students from The Netherlands and UK	Hertford
2014	Kaspar Exhibition	National Autistic Society professional conference	Harrogate
2014	Kaspar Presentation & exhibition	Autism West Midlands Conference	Birmingham

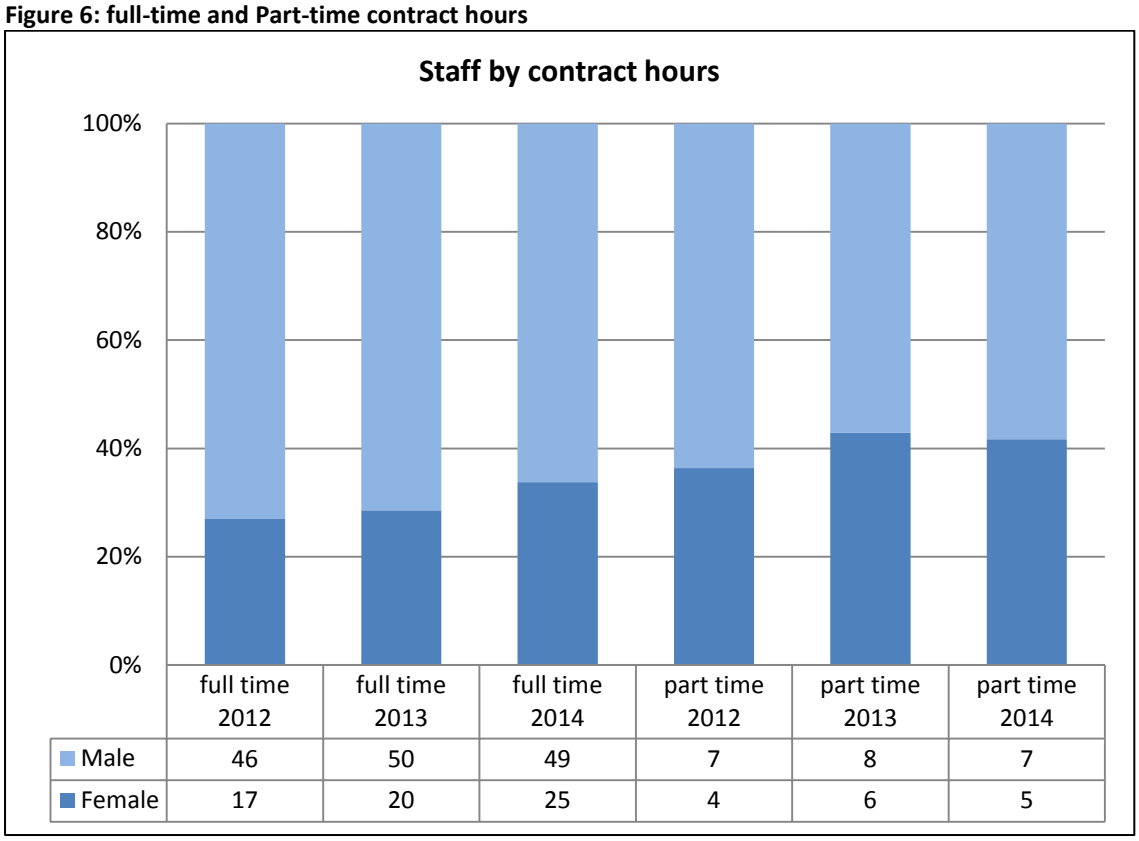
Action 4.4: Work with Marketing on UH Road show to ensure female representation and review outreach activities, ensure male and female representation equal.

Flexibility and managing career breaks

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

As illustrated in Figure 6 below the proportion of full-time female staff in the School over the past three years has steadily increased from just less than 30% in 2012 to just over 30%. This is explained partly by the retirement of staff who all have been male, and the recruitment of new staff that include females. The School is pleased that the level of about 30% female staff is above the norm for computer science and engineering departments. The School's goal is to increase female participation, and create opportunities to support and encourage women to consider computer science as a career and to progress to senior positions. The proportion of part-time female staff in the School is about 40%, and has fluctuated slightly over the past three years, showing a small upward trend. The part-time posts provide opportunities for staff to create a work/life balance that is satisfactory for them while still satisfying the business needs of the School. The School supports and follows the University's Flexible Working policy, and to date has always granted requests for flexible working arrangements and permission to work at home.

Figure 6: full-time and Part-time contract hours



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

Note that the data counts if a member of staff was taking maternity leave in the time frame - if the maternity leave ran from Jun 2012 - October 2012 then they will show in both 2011-2012 and 2012-2013 data. Three members of staff took paid maternity leave and all returned to work (Table 17).

Table 17: Maternity, paternity leave

Computer Science	Number of staff paid maternity	Number of staff paid KIT	Number of staff paid paternity
01 Aug 11 - 31 Jul 12	2	0	0
01 Aug 12 - 31 Jul 13	0	0	0
01 Aug 13 - 31 Jul 14	1	0	0

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

There has been no paid adoption or paid parental leave claimed in the 3 year period.

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

There have been no formal flexible working arrangement requests under the 1996 Employment Act in the 3 year period 2011-2014. However, a substantial number of staff have informal arrangements in place and can ask to meet with their line manager, or the Dean, to discuss their individual needs (see section below).

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

(i) ***Flexible working*** *– comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.*

The School raises awareness of the University-wide flexible working policy in the School staff handbook. This is an online resource housed on the staff Intranet. Additionally, a link to the handbook is periodically emailed to staff by the Dean of School. The policy is available on the University intranet which is more widely accessible and staff can access this directly through the staff portal. The flexible working survey conducted as part of the School's Athena SWAN initiative shows that 40% of staff are aware of the formal flexible working policy. To continue to raise awareness about the university flexible working policy via email, the staff handbook and news and views meetings **(Action 6.10).**

Training is provided to all line managers to help promote and manage flexible working arrangements. Results of the flexible working survey indicate that colleagues see flexibility as embedded in our work practices. Staff cited that:

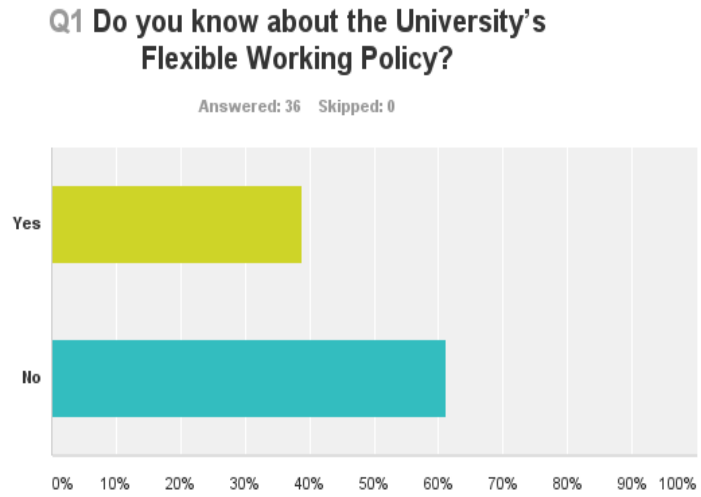
"They can work flexibly and that this provides them with a better work/home life balance, enabling them to achieve a higher quality of work without concern for childcare".

Furthermore, the School has a 'working at home' policy where working from home is easy to organise. This is also made known to staff in the schools staff handbook. A colleague comments:

"We have good technical infrastructure and support to accommodate staff working at home this means I can work at home and be more productive without interruptions".

This has also been reported to work well for those without children.

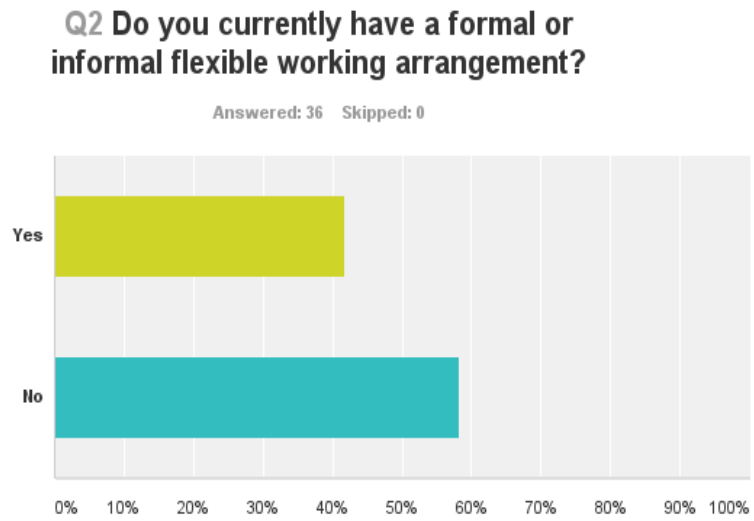
Figure 7: Question 1 of school flexible working survey



As Figure 8 below illustrates a number of staff have agreed informal flexible working arrangements with their line manager. When asked how this has helped colleagues, some stated that: "A*chieving a better work and home balance, helps to manage peaks and troughs in demand at work*" and that flexible working patterns can *"Provide better work/life balance as I head towards full retirement"*.

One colleague suggested that flexible working *"enables me to combine work and looking after the needs of my children"* and *"being able to start half an hour early means my journey in is faster, the office is very quiet when I arrive which means real quality work time with no interruptions".* Finally, one colleague stated *"Managing the needs of my young children around my work commitments, I can work just as well at home a fair amount of the (non-teaching) time".*

Figure 8: Question 2 of school flexible working survey



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

We ensure that all staff have a suitable work-life balance and we are vigilant about issues that might affect those with young children or those that are carers. Before going on maternity, paternity or adoption leave the line manager has a meeting with the member of staff to discuss how best to address their role in their absence and how to manage their return to work and any other support that they may deem necessary. Normally this would mean assigning the work to one or more other members of staff, with the understanding that these responsibilities will be relinquished on return from leave. On return from leave the member of staff has a meeting with management about how best to manage their return to work. This would include a discussion of any adjustments to the nature of their work and the phasing of their return to full duties. We have a policy of allowing flexible working for all staff with caring responsibilities.

Action 6.10: Continue to raise awareness about the university flexible working policy via email, the staff handbook and news and views meetings.

Word Count: 4572 words

c) Any other comments: maximum 500 words

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

In addition to other initiatives highlighted throughout this application we have engaged in various dissemination activities, for example a two hour lecture on BCS Women, Ada Lovelace and other inspirational women in Computer Science has been embedded into the 4COM0035/36 Human Dimensions in Computing modules on the first year BSc and IT programme of study. These modules are delivered to 340 students by a team of 14 staff of whom 50% are male and 50% are female. As a direct consequence more male students are aware of the inspirational women in the discipline and demonstrate an awareness of the issues related to under representation of women and females have been provided with role models. Furthermore, to celebrate the life and achievements of Ada Lovelace, the BCS Hertfordshire branch held its first Commemorative lecture open to the public on 14 October 2014. We believe that these endeavours have the potential to attract female students and dispel the myth that "technology is toys for the boys".

Overall, the application shows that we are fully committed to the Athena SWAN process, that we have identified both areas where we can draw encouragement from our existing practices, as well as insights into where we can improve. As demonstrated in the application we are committed to Equality and Diversity in the wider university and national context. For example, members of the School SAT will continue to act as reviewers on the Athena SWAN review panels in London **(Action 6.12).**

Word Count: 244 words

d) Action plan

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

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

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

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
		1. SAT membership and process activities (including Consultation activities)					
1.1	7	Continue to work with Professor Clark (at York) and set up the EPSRC/Athena Swan workshop	Regular communication via telephone and email. Workshop dates agreed 30-31 March 2015		CS SAT	2014-2015	Positive feedback from participants. Gender Count
1.2.	8	Attend British Computer Society Athena Swan event in London and report back to School (December) Attend STEMM 2015 Conference in London (January)	One team member registered for both event		CS SAT Chair/Champion	2014-2015	Event Complete
1.3.	8	School Athena Swan Self-Assessment Team (SAT) to report to UH SAT.	Athena Swan Champion (Chair of School SAT) sits on the UH SAT, reports made on a monthly basis		CS SAT	At annual quarterly meetings	Application successful
1.4.	8	Include Athena Swan item on School's News and Views meetings	Chair of School SAT reported formally on a monthly basis to the School meeting to raise awareness and updates of Athena Swan		Senior Executive Group, CS SAT Chair/Champion to report at meeting	Ongoing	School staff are kept informed, increase awareness, feedback from staff

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
		2. Student data: numbers, applications/offers/acceptances and degree attainment					
2.1	10	Continue to monitor student numbers by gender on full and part-time UG, PGT and PGR courses. And benchmark with recent benchmarking data when available.	Data analysed and included in application		CS SAT Programme tutors (Annual Monitoring Reviews)	Ongoing	Ability to obtain valid, timely and relevant data from the centre.
2.2.	10	Continue to monitor student applications, offers and acceptances on all existing and new courses by gender to assess whether our actions have made a difference.	Data analysed and included in application		Athena Swan Working Group Programme tutors (Annual Monitoring Reviews)	Ongoing	Ability to obtain valid, timely and relevant data from the centre.
2.3.	14	Continue to monitor student degree classification by gender.	Data analysed and included in application.		Athena Swan Working Group Programme tutors (Annual Monitoring Reviews)	Ongoing	Ability to obtain valid, timely and relevant data from the centre.
		3. Webpages and marketing/promotional materials					
3.1	9	Continue to increase the visibility of female staff and graduate in promotional activities	Worked with marketing. Female representation		Marketing Office	Ongoing	Gender Count, monitor undergraduate and postgraduate intake, compare with previous years

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
		4. Increase female student numbers on part-time and full-time UG, PGT and PGR.					
4.1	11	Ensure future postgraduate open days include female role models.	Communications with marketing and MSc programme tutors, plans progressing		Marketing Office	One-off change	Gender count, monitor postgraduate intake, compare with previous years
4.2	11	Coordinate talks to 3rd year UG students to introduce them to postgraduate study opportunities; to include post-talk drop-in sessions hosted by female academics.	Communications with marketing and BSc programme tutors, plans progressing		BSc Programme Tutor, Marketing	Annually	Collate feedback, count numbers progressing from BSc to postgraduate study
4.3	10	Undertake research to understand why females choose to study with us in order to inform future actions.			CS SAT	Survey to be carried out 2015-2016	Produce report
4.4	10	Work with Marketing on UH Road show to ensure female representation in future Review outreach activities, male and female representation	Chair of School SAT communicated intentions to work with Marketing when planning the next UH Roadshow. Meeting and communications with Marketing, School team and Head of Staffing		CS SAT Marketing, Recruitment Officer School Outreach team/Marketing	Annually Ongoing	Event Complete Gender count

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
		5. Staff data					
5.1.	19	Continue to monitor staff figures (including application figure and success rates) and benchmark with more recent benchmarking data when available.	Data analysed and included in application		Athena Swan Group	Ongoing	Availability of valid/timely/relevant data
		6. Career development, support and promotion					
6.1	20	Highlight and explain the EQUATE promotion process to appraisees in a school seminar and via line managers during appraisal.	Communications with HR		Line managers and Dean	One off event, school seminar and annual appraisals	Line managers to be emailed to check compliance
6.2	17	Identify individuals (at appraisal) who wish to achieve Reader or Professorial status and put a plan of action together for them in consultation with the Dean. Identify researchers (at appraisal) for promotion at grade 7 and grade 8.			Line Managers and Dean	Annually at appraisal	Monitoring of appraisal outcome. Promotion success rates

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
6.3	20	Interview individuals who have been successful in achieving readership and professorship to understand the needs of those who wish to progress and understand any obstacles or barriers to promotion.			CS SAT	2015-2017	Produce a paper for staff
6.4	22	Further highlight and promote UH development (CPD) opportunities to female members of staff during appraisal and school events.			CS SAT Dean of School	Ongoing	Monitor participation
6.5	22	Experiences of the Aurora Programme presentation to staff Raise awareness; invite current and past participants to speak.			CS SAT Chair/Champion	One-off	Event Complete Increase awareness and inclusion, participant feedback
6.6	23	Develop mentoring scheme; determine how to promote a mentoring scheme that addresses the need for more women to apply for promotion.			HR Research Development Working Group	2015-2017	Produce report

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
6.7	23	Continue to promote and raise awareness of BCS Women, ACM Women, Lovelace Colloquium and other initiatives (staff and students. Encourage attendance, and provide financial support.	Emails sent out to staff as events arise. To date 3 female members of staff have participated and financially supported by the Dean of School.		CS SAT	Ongoing	Register of events, participant feedback
6.8	23	Invite influential women speakers to present at the Computer Science at 50 and other events	In progress, communications between marketing and the School		CS SAT, Dean of School/Associate Dean Commercial	2015-2016	Event Complete
6.9	31	Continue to use format regarding career presentations at future school away days	Athena Swan themed away day 17 September 2014. A number of staff showcased their career path		CS SAT Dean of School	Annually	Event Complete. Feedback from staff
6.10	35	Continue to raise awareness about the university flexible working policy via email, the staff handbook and news and views meetings	School conducted a flexible working survey as part of the Athena Swan application		CS SAT Dean of School	Ongoing	Staff handbook updated, emails sent, increased awareness -feedback from staff (include with action 6.11 research)
6.11	24	Conduct research across the school to ascertain career development needs and support	An outcome of the flexible working survey conducted as part of the Athena Swan application		CS SAT Dean of School	2015-2017	Produce a report and disseminate

Action	Page No.	Description of Action	Action Already Taken at November 2014	Progress Log	Responsibility	Timescale	Success Measures
6.12	38	Continue to review Athena Swan applications	2 members of the School SAT attended Athena Swan review panels in London, July 2014		CS SAT	Ongoing	Attendance at panels
		7. Staff training					
7.1	21	Unconscious bias training	Training started in October, email alerts to staff eight staff have attended		Equality Office	2014-2015	Monitor attendance figures
7.2	24	Line Managers to review at appraisal when the member of staff last attended Equality & Diversity Training and encourage all members of staff to attend such training.	The majority of School staff attended Equality Training provided at the School Away day on 17th September 2014. Of those, who did not attend, they have been encouraged by the Dean to undertake the online course and report to the Dean.		Line Managers CS SAT Dean of School	2015-2017	Appraisal outcome, monitor
		8. Staff recruitment: increase number of female applicants					
8.1	22	Include family-friendly information and contact details of a female on job advertisements			Dean/Dean's EA	As required	Monitor adverts