



Athena SWAN Silver Department Award Application

Name of University: **University of Exeter**

Department: **Mathematics and Computer Sciences**

Date of application: **April 2016**

Date of University Bronze Athena SWAN award: **November 2014**

Contact for application: **Professor Mark Baldwin (Head of Department)**

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Athena SWAN Silver 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.

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*(how much additional word count used)*

\* Word count is shown in brackets at the end of each subsection and section. This application was awarded 500 additional words due to the dual-discipline nature and future splitting of the Maths and Computer Science Department. We used 487 additional words of the additional word count allocated, between sections 1, 4 and 5.

**Table 1: Abbreviations**

<b>AS</b>	Athena SWAN
<b>ASPIRE</b>	Accrediting Staff Professionalism in Research-Led Education
<b>ASSG</b>	Maths and Computer Science Athena SWAN Strategy Group
<b>ASWG</b>	Athena SWAN Working Group
<b>CEMPs</b>	College of Engineering, Mathematics and Physical Sciences
<b>CS</b>	Computer Science
<b>DLHE</b>	Destination of Leavers of Higher Education
<b>E&amp;R</b>	Education and Research Career Pathway
<b>E&amp;S</b>	Education and Scholarship Career Pathway
<b>ECN</b>	Early Career Network
<b>ECR</b>	Early Career Researcher (i.e. Postdoctoral Researcher)
<b>ECU</b>	Equality Challenge Unit
<b>EMS</b>	Exeter Maths School
<b>EPSRC</b>	Engineering and Physical Sciences Research Council
<b>GW4</b>	Great Western 4 Universities: Bath, Bristol, Cardiff and Exeter
<b>HEA</b>	Higher Education Academy
<b>HoD</b>	Head of Department
<b>HRBP</b>	Human Resources Business Partner
<b>LTHE</b>	Learning and Teaching in Higher Education
<b>MCS</b>	The Mathematics and Computer Science Department
<b>MCSASWG</b>	Maths and Computer Science Athena SWAN Working Group
<b>PGR</b>	Postgraduate Research Students (i.e. PhD students)
<b>PGT</b>	Postgraduate Taught Students (i.e. Masters students)
<b>R-only</b>	Research only Career Pathway
<b>SSLC</b>	Staff Student Liaison Committee
<b>STEMM</b>	Science, Technology, Engineering, Maths and Medicine
<b>UoE</b>	University of Exeter
<b>WISE</b>	Women in Science and Engineering

N.B. Action Points are identified in the text as 'APX.X'. **Key areas of impact are emboldened.**

1.

## DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

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**Head of Mathematics and Computer Science:  
Professor Mark P Baldwin PhD FLF FRMetS CCM**

Ms Dickinson,  
Equality Challenge Unit,  
7th Floor Queen's House,  
55/56 Lincoln's Inn Field,  
London  
WC2A 3LJ

29th April 2016

Dear Ms Dickinson,

As Head of Mathematics and Computer Science (MCS), I write to offer my unreserved commitment to the Athena SWAN (AS) Charter principles, and to our application for a Silver Award. My primary goal is to build our Department by creating an inclusive working environment that attracts the best academics and students, worldwide—particularly women. Our commitment to AS is a key component of that goal.

Our application provides evidence that we are making a positive impact. We are focusing on key gaps in the 'pipeline' and we are embedding AS activities deeper within our Departmental culture. It is exciting to see the upward trend in the number of female academics, **from 1 in 2010 to 9 in September 2016**. We are now **attracting more talented female academic applicants (up from 10% in 2010 to 22% in 2015/16)**. **In 2014, we appointed our first ever female professor and during 2015/16 have fully 40% of new academic appointments being women.**

Our personal experiences can offer valuable insights that make us more receptive and committed to gender equality at all levels. For me, it started when my wife and I were at university together in the US. She started as a Maths/Physics major, but switched to Economics. Her switch wasn't due to academic performance but rather with a general discomfort in her surroundings—a sense of not quite 'fitting in' while in class. I want our students, our staff and our faculty members—regardless of gender—to find role models and support pathways that allow them to feel comfortable. This starts with our undergraduate recruitment strategy which places a strong emphasis on outreach activities, particularly towards women. **Since Bronze, we have implemented a pioneering mentorship scheme with the Exeter Maths School (EMS) to encourage pre-university interest in mathematics, and a cross-college academic and research staff mentoring programme to further support career progression.**

This is an on-going journey. However, it is important to pause in order to assess the gains we have made to date and to identify which of the critical challenges we face. We are proud to have worked on and influenced the University strategy and processes through our representation on the University-level Athena SWAN Working Group (ASWG). **Our active participation in the 2015 University consultations helped to secure two new nurseries, and lead to more transparent promotion criteria from Senior Lecturer to Associate Professor and pro-rated promotion criteria for part-time staff (launched March 2016).** We also identified barriers for female Engineering and Physical Sciences Research Council (EPSRC) PhD studentship applicants and resultantly drove a university-wide policy change that lead **directly to a new EPSRC-funded female PGR student.**

Clearly until society views primary care-giving of the elderly and of children as a human issue and not just a women's issue, talented women will seek out more flexibility in balancing their career goals with other aspects of their lives. We offer a supportive working environment (as highlighted in all job adverts) with generous and flexible family support. Flexible working is encouraged for all staff and we have scheduled **all Departmental meetings to be inside "core hours" of 10–4 since 2012.** Our future focus will be on gaining a deeper understanding of key drivers for female scientists leaving careers in Science, Technology, Engineering, Maths and Medicine (STEMM) subjects, in particular the impact of dual-career partnerships in the UK, as international research indicates this could be a key factor in retaining female staff.

Yours sincerely,

A handwritten signature in blue ink that reads "Mark P. Baldwin". The signature is written in a cursive, flowing style.

Professor Mark Baldwin

**[Section 1 Total Word Count = 568]**

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

- 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.

*Self-Assessment Team.* The Maths and Computer Science Athena SWAN Working Group (MCSASWG) (Table 2) has a diverse membership, spanning each of our career paths, stages and student communities. It includes staff with and without caring responsibilities; single and in relationships and dual career paths; from undergraduate to professor. We currently have part-time staff on committees that feed into the MCSASWG, and consult with them regularly (AP6.15).

[Word Count = 66]

**Table 2 removed.**

- 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

Due to the success and growth of Computer Science (CS), the University has made a strategic decision to make CS a separate Department in late 2016. This change has no effect on the current AS application. However, for clarity we present some data separately for Maths and CS. Following ECU guidance regarding this split, we have clearly differentiated in the Action Plan which actions are specific to Maths or CS and which ones are combined. Both Heads of Department (HoDs) sit on the MCSASWG and will continue to do so for the three years of the award.

MCSASWG membership is reviewed annually, with an open invitation sent to all staff and students every August by the HoD (both HoDs in future). We monitor and accept applicants who ensure we have a spread of staff and student members who span all grades and career pathways (~50-55% female from 2013–2016).

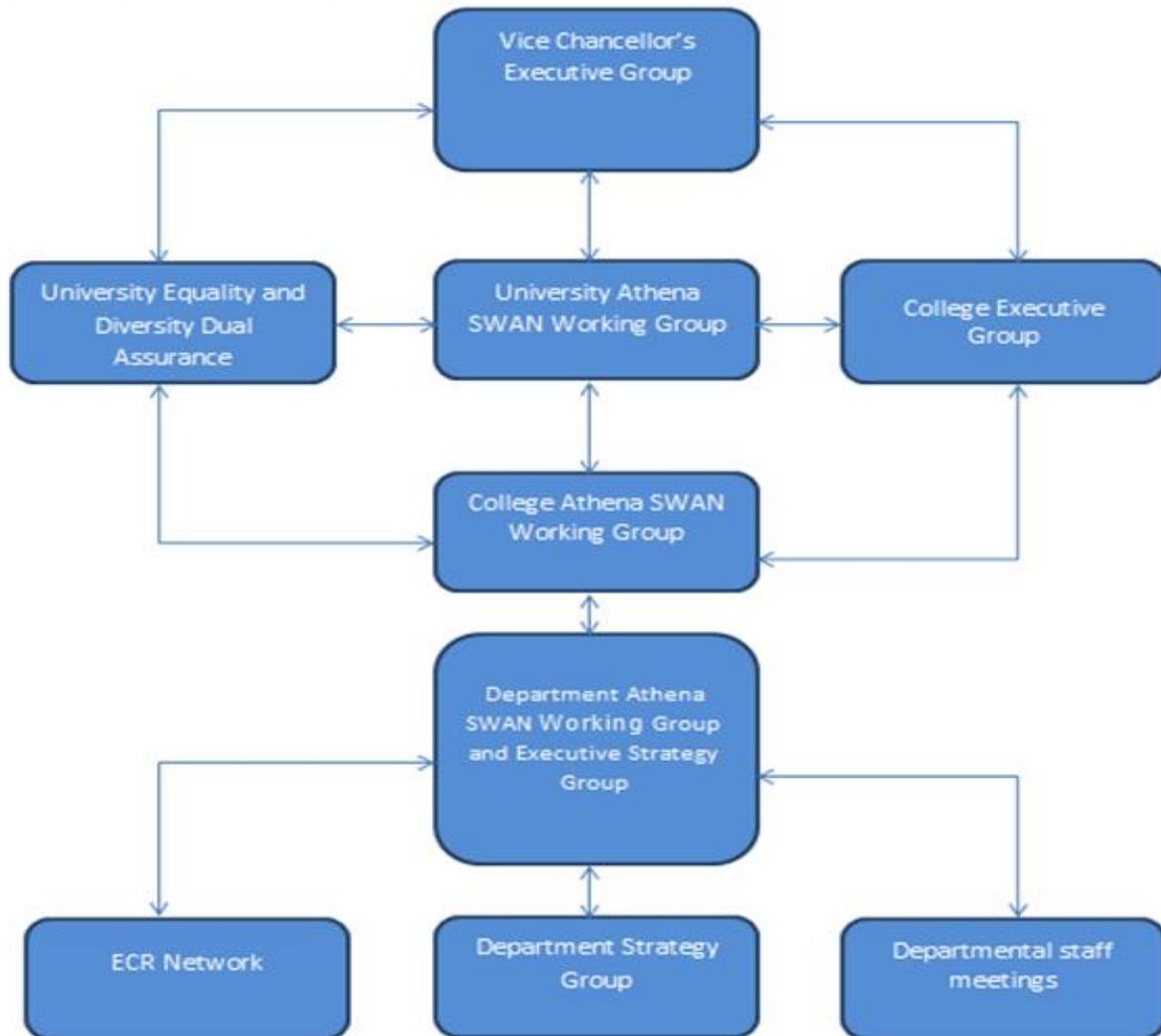
In 2014, in response to our Bronze feedback, **we reorganised the MCSASWG by AS role** (see Table 2). This facilitates inducting new members and retaining knowledge as each role holder will induct their replacement. Each member has up to 200 hours in our Workload Model (AP1.6).

The MCSASWG meets monthly (32 meetings since 2013) during core hours of 10am–4pm (AP6.11), with minutes available on our intranet. Our HoD has chaired the group since our Bronze award, encouraging engagement and support from all senior staff.

Since Bronze MCS have created a five-member Athena SWAN Strategy Group (ASSG), composed of the HoD (chair) and senior academics (AP6.15). An AS Officer also attends to share best practice from other departments (see Table 2). The ASSG meets separately once per month to review data and our Action Plan, coordinate the agendas for MCSASWG monthly meetings in which we monitor and analyse the impact of our activities, agree new actions, execute surveys, and promote relevant events and initiatives.

The MCSASWG and ASSG feed into each other and local (Departmental) decision-making groups (See Figure 1). They also report to the College and University ASWGs via monthly meetings attended by the MCSASWG Chair and that in turn feeds into the wider College and University level senior management groups (AP6.3). At each AS meeting, specific discussion topics are preceded by updates from the University and College ASWGs.

Figure 1: Diagram of the reporting channels for the ASWGs



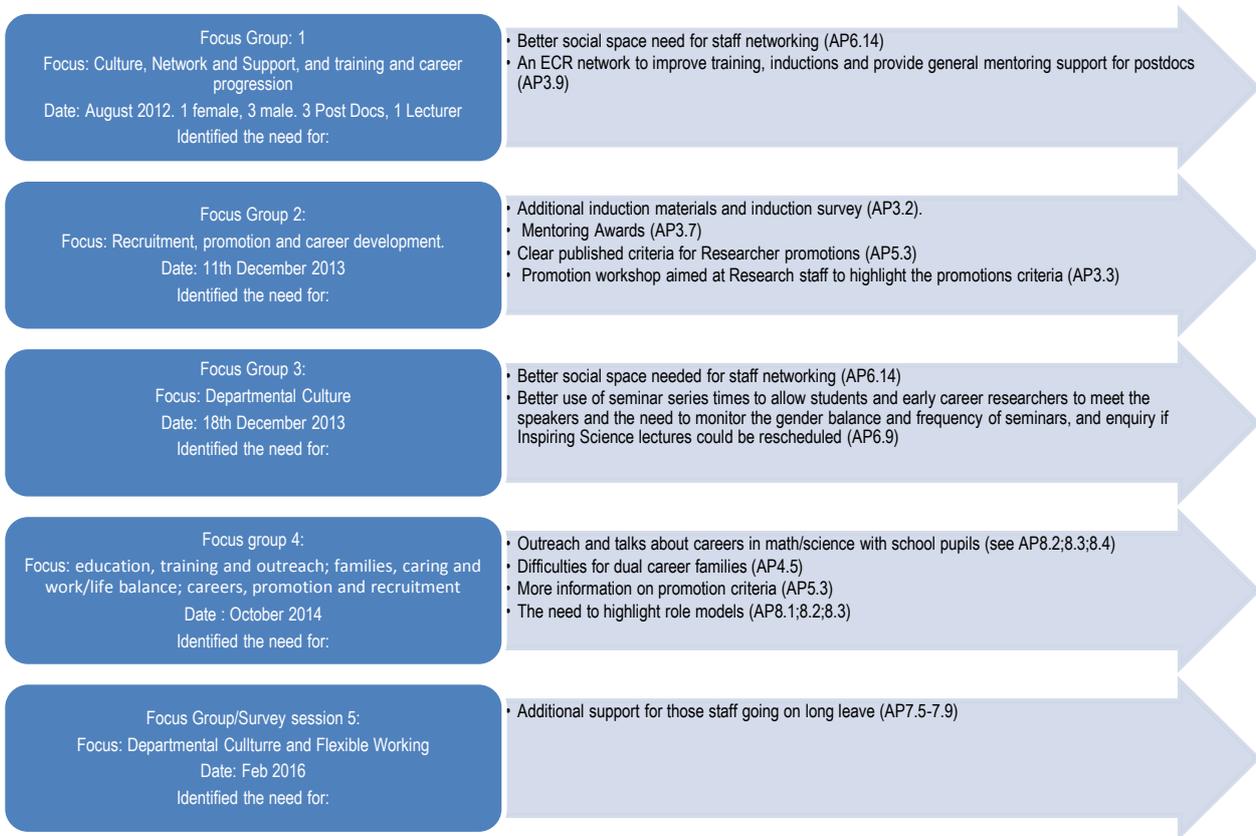
*Wider Consultation:* We consult with staff and students to inform our actions and measure their impact on our departmental culture and career progression via:

- **2012 and 2014 Employee Engagement Survey:** The University's annual Employee Engagement Survey provides a rich source of consultative data. Currently it is provided at College Level, but will be broken down by department in 2016. We consider it representative of our Department and use it to guide and measure our actions (AP1.8;3.1;5.1; 5.2; 6.2;6.14;7.1-7.9;9.1);
- **AS Staff and Student Survey: 2012-15 (AP1.4).** For Bronze the 2012 staff and student surveys highlighted the need to increase the visibility of our female role models, resulting in AP2.1; 2.5;2.6;2.12;2.14;2.15;2.16;8.18.2;8.3;8.4;8.5 for students and AP3.6;3.7;3.9;3.10;5.1;6.1;6.8;6.9 (see pg.41-

- 43). Following the Survey's success we have secured £4000 funding for a second undergraduate student research project to continue gathering longitudinal student data to guide our actions and evidence our impact;
- **Four focus groups (AP1.3)** since 2012, looking at career progression, recruitment and retention (see Figure 2);
  - **Attending national and regional AS Events:** From attending AS events we have shared our best practice and have investigated establishing national research projects into barriers to female career progression (AP4.5;9.3;9.4) (see pg.37-38)

We will continue using our Departmental focus groups, Employee Engagement Survey and AS working groups to inform our actions past-silver.

**Figure 2: Focus Group Topics and Impact**



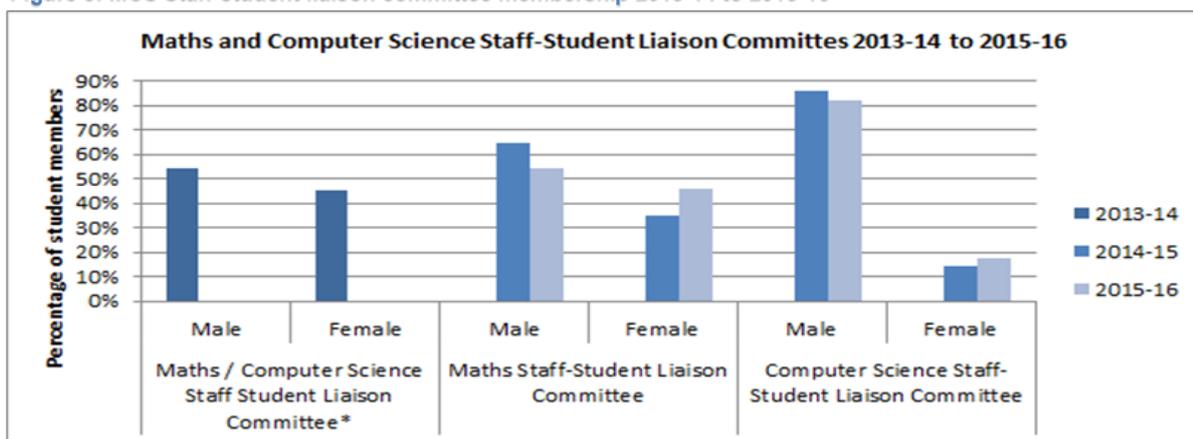
We disseminate information about the MCSASWG work via:

- **The Early Career Research Network (AP3.9);**
- **Departmental Meetings:** MCSASWG reports to and surveys staff through these meetings, AS is a standing item and minutes are emailed to all staff (AP6.2);
- **Student Staff Liaison Committee (SSLC) & Student Workshops:** The undergraduate student representative on MCSASWG liaises with the SSLC. The SSLC currently has a 7:4 female:male student ratio (see Figure 3), and is chaired by [name removed], who meets for coffee on occasion with the Chair of the ASWG to update on any AS related feedback;

- CEMPs have contributed £4000 to the development of undergraduate Equality and Diversity training to prepare them as future Business leaders and build the AS Culture within our undergraduate community (AP2.15).

We would like to thank our External Reviewer: [name removed] from [institution removed], for their impartial feedback on our application, and the GW4 AS group for sharing best AS practice between our institutions.

Figure 3: MCS Staff-student liaison committee membership 2013-14 to 2015-16



[Word Count =762]

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

Following submission the MCSASWG and ASSG will continue to meet monthly, reporting to the University and College ASWGs, and College Strategy Group. We plan to code an **online AS-Wiki tool** to keep track of all our ASWG actions, data and progress, *and their history* to better record action's historical rationale, support new member inductions, and monitor the action's progress on a monthly basis (AP1.2). Factsheets, surveys and the University's AS website peer-review literature and materials are circulated (AP6.4). This allows us to stay up-to-date with activities across the University and provides a forum we actively use to share best-practice (AP9.1).

*Data collection:* We received biannual core data packs from 2009/10 to 2015/16, allowing the analysis of trends and the impact of our actions (AP1.1). In March 2016 we began monthly updates. The data are parsed by department, gender, career path, grade, etc., including information on fixed term contracts, part/full time, promotions and parent and carer leave. Benchmarks (unless otherwise stated) are taken from the ECU Higher Education Statistical Report 2015.

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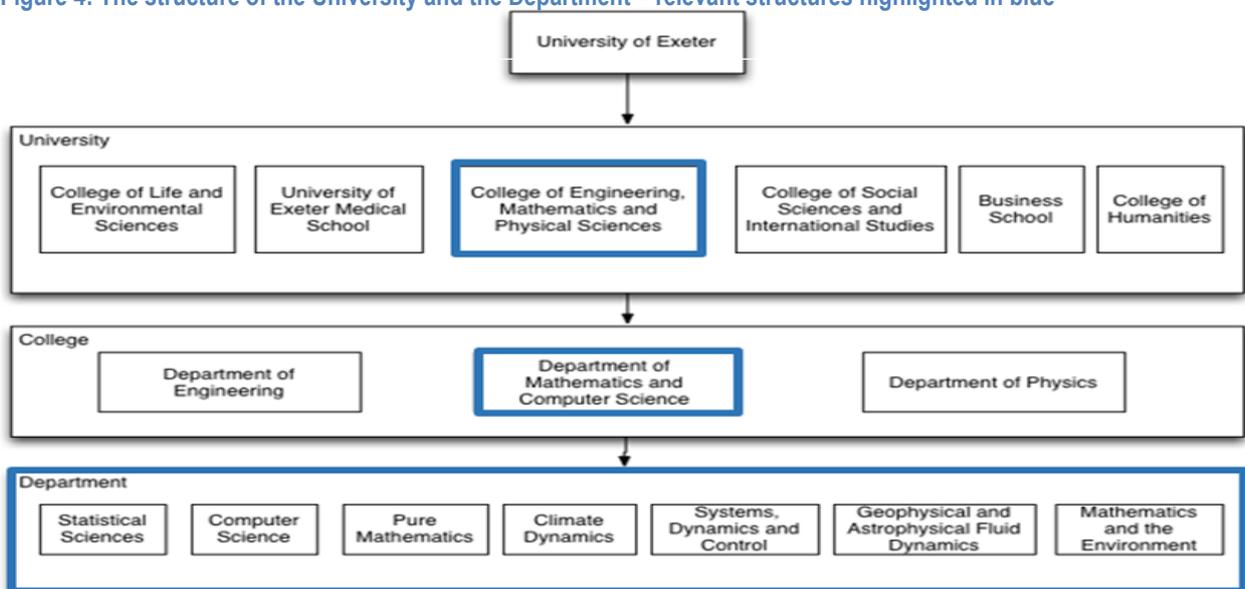
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### 3. A picture of the department: maximum 2000 word

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

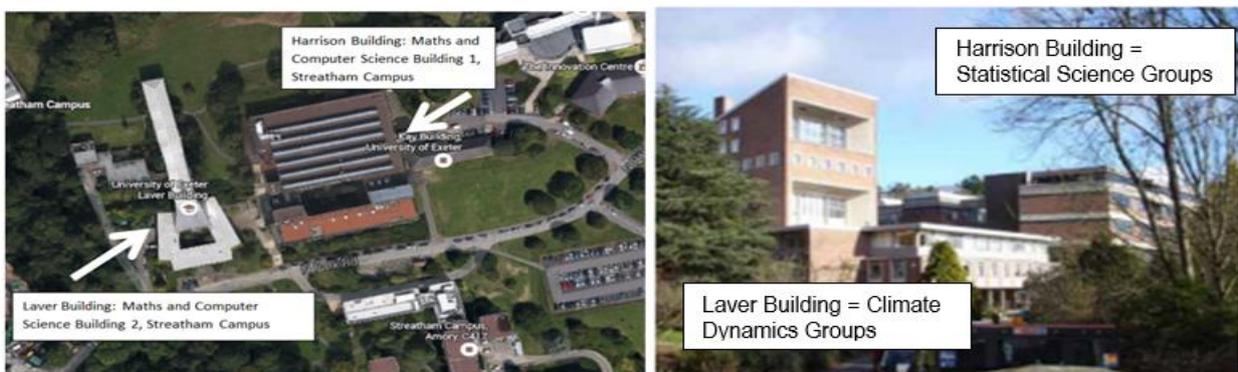
The University is organised into six Colleges (three STEMM). The MCS Department is in CEMPs. The Colleges are the main financial and major decision-making bodies. All CEMPs' Departments' HoDs are members of their College's Executive Group. Most initiatives operate at College level to increase engagement, facilitate cross-Department networking and sharing of best practice. For example our Early Career Network (ECN) (AP3.9) and Research and Academic Staff mentoring scheme (AP3.7), are organised at the College level and involve all CEMPs' research and academic staff. However, many initiatives are generated by the Departments, for example the mentoring scheme came from MCS.

Figure 4: The structure of the University and the Department – relevant structures highlighted in blue



MCS currently occupies two buildings on the Exeter Campus (Streatham) and one building on the Cornwall Campus (Penryn) (See figure 5).

Figure 5: Laver and Harrison Building Positions and Research Groups, Streatham Campus, Exeter.



MCS has a friendly collegiate culture as evidenced by Figure 6.

Figure 6: Most frequent responses to Feb 2016 Focus Group Question ‘what three main words would you use to describe MCS’. Friendly = 9, Supportive = 5, Ambitious = 3.



UoE organises Professional Service staff at College and University levels, so there are very few professional services staff within the MCS. Consequently Professional Services staff are not part of this Department application, but did participate in focus groups / local surveys.

Figure 7: UG and PGT degree programmes offered by MCS. CS degrees are in italics.

3 year UG

- BSc Mathematics
- BSc Mathematics with Accounting
- BSc Mathematics with Economics
- BSc Mathematics with Finance
- BSc Mathematics with Management
- BSc Mathematics with Physics
- BSc Computer Science*
- BSc Computer Science with Industrial Placement*
- BSc Computer Science and Mathematics*
- BSc Computer Science and Mathematics with Industrial Placement*
- BSc Natural Sciences

4 year UG

- MMath Mathematics
- MMath Mathematics with International Study
- MMath Mathematics with Professional Experience
- MSci Mathematics (Climate Science)
- MSci Mathematics (Geophysical and Astrophysical Fluid Dynamics)
- MSci Mathematics (Mathematical Biology)
- MSci Mathematics, Business and Finance
- MSci Computer Science*
- MSci Computer Science and Mathematics*
- MSci Natural Sciences

PGT

- MSc Advance Mathematics
- MSc Computational Finance
- MSc Financial Mathematics
- MSc IT Management for Business*

MCS is divided into research groups led by an Academic Lead. The current research groups are: Pure Mathematics; Geophysical and Astrophysical Fluid Dynamics; Systems, Dynamics and Control; Climate Dynamics; Statistical Science; CS and Mathematics and the Environment. Mathematics and the Environment is based at the Penryn Campus in Cornwall. Some members of staff are in two groups, for example Pure Mathematics and Systems, Dynamics and Control. There is extensive interaction between these groups, both in teaching and research.

MCS has 65 academic staff (51 in Mathematics and 14 in CS) with both single and joint honours courses in MCS. We also contribute to the Natural Sciences programme (Figure 7). These undergraduate programmes offer both 3-year BSc degrees and 4-year MMath and MSci degrees. There are currently 630 undergraduate students studying Mathematics (41% female), 168 studying CS (16% female), and 100 studying Natural Sciences (47% female). All degrees are available part time.

We teach Postgraduate Taught (PGT) programmes (25 students, 48% female) and have an active PhD programme (around 50-60 students, 20% female). CS will form its own department in the next few years. We quote separate data for Maths and CS student numbers as benchmarks are different, but give staff figures for the whole Department.

UoE has three job families for academic and research staff: Education and Research (E&R), Education and Scholarship (E&S) and Research only (R only) with grades spanning E to Professor (Table 3). It is possible to move between the job families.

**Table 3: University Career Paths and Grades for Academic and Research Staff Job Families**

	Research	Education and Scholarship	Education and Research
<b>Grade E</b>	Associate Research Fellow	Associate Lecturer	
<b>Grade F</b>	Research Fellow	Lecturer	Lecturer
<b>Grade G</b>	Senior Research Fellow	Senior Lecturer	Senior Lecturer
<b>Grade H</b>	Associate Professor	Associate Professor	Associate Professor
<b>Professor</b>	Professor	Professor	Professor

[Word Count = 416]

[Section 2 Total Word Count: 1000]

1. 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.

We do not have foundation courses, however UoE sponsors the Exeter Mathematics School (EMS); one of only two specialist mathematics schools in the country. We actively work with EMS to encourage women to study mathematics, via outreach events and mentoring female students and staff at the school (AP8.2).

[Word Count = 48]

- (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.

For the undergraduate Mathematics degree (Dataset 1a) the proportion of females, between 2011/12-2015/16 across both three and four year degrees varies from 42-46% and does not appear to be changing (benchmark 38.8%).

Dataset 1b shows in 2011/12 and 2012/13 we had about 20% female CS students out a total of 25 students per year. Since then we have expanded the numbers of undergraduates to over 100 per year and the proportion of female students

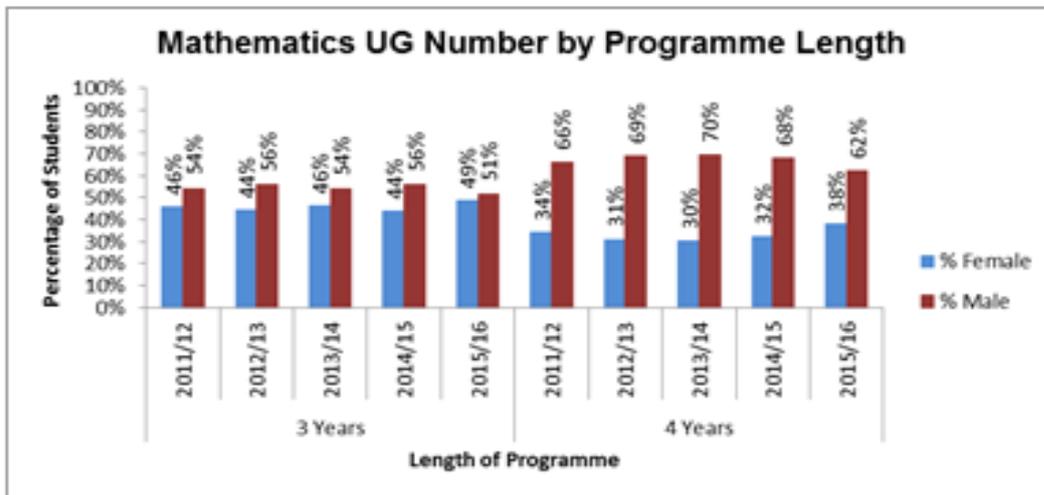
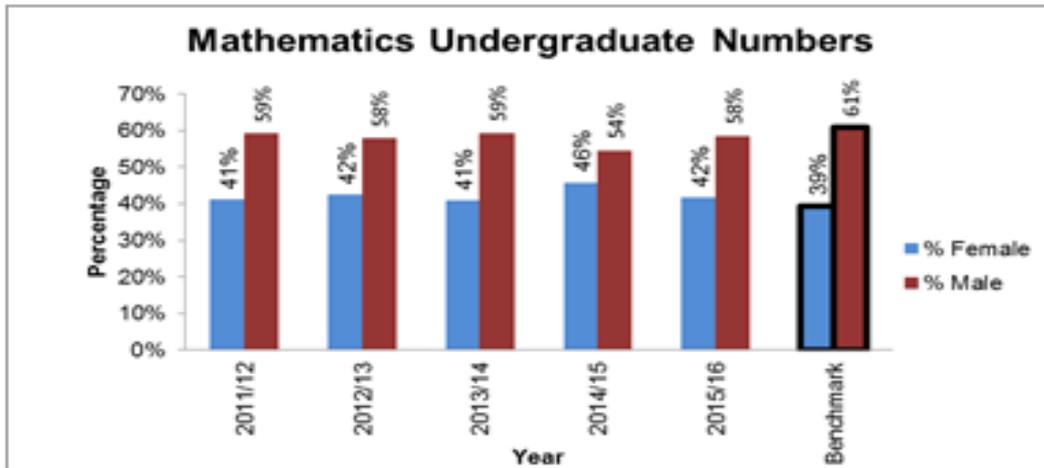
has fallen to 16% (benchmark 15%). We have identified this as a key 'gap' and are targeting our future actions at attracting female CS undergraduates (AP2.1;2.16;8.1-8.9).

MCS contributes, with Physics and Biological Sciences, to the degree in Natural Sciences. This has been running for two years and had 29 (49%) female students out of 59 in 2014/15 and 48 (47%) out of 101 in 2015/16. There are no benchmarks for Natural Sciences.

We carried out surveys of our undergraduates in 2012 and 2015 (part of a PhD project part funded by CEMPs) to investigate any difference between gender (AP1.4). The first survey found that there was a difference in levels of confidence in our third year female students compared to their male colleagues, although this is not reflected in their results, and we implemented actions AP2.1; 2.5;2.6;2.12;2.14;2.15;2.16;8.18.2;8.3;8.4;8.5 to address this. **The repeat of the survey showed an improvement in female students' feelings of 'fit' and confidence in the discipline.** However, we recognise there is still work to be done to encourage our students to progress onto PGR and our four-year course (AP2.16). Take up of part-time study opportunities is low and we will continue to highlight the opportunity to study full or part-time on our undergraduate and postgraduate course website and materials.

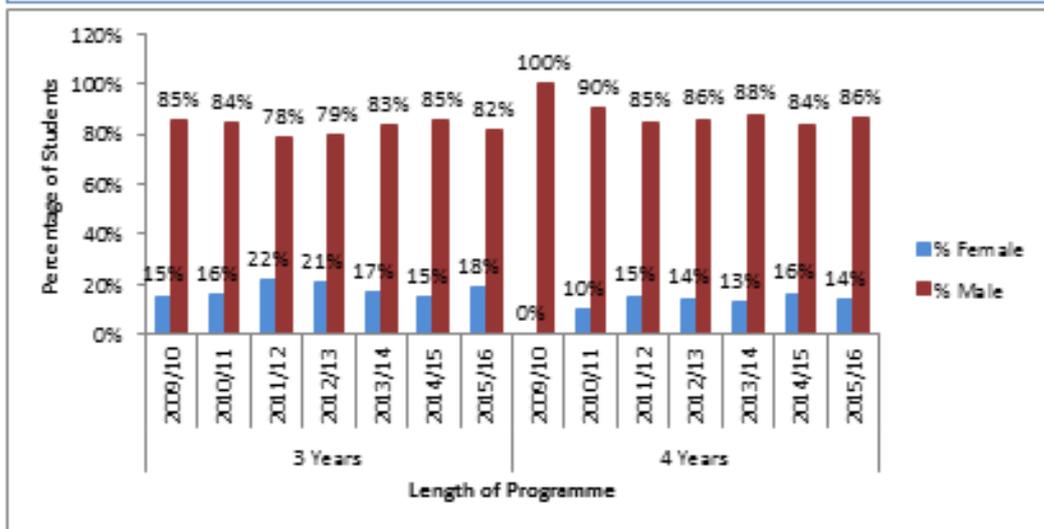
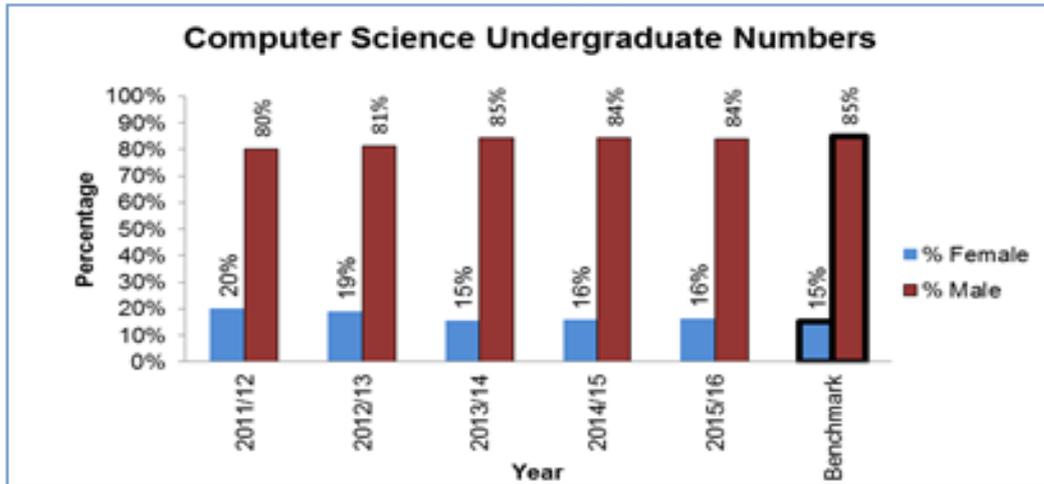
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**Data Set 1a:** The percentage of registered Mathematics undergraduate students by gender over time.



		% Female
2011/12	Full-Time	41%
	Part-Time	67%
	All	41%
2012/13	Full-Time	42%
	Part-Time	33%
	All	42%
2013/14	Full-Time	41%
	Part-Time	36%
	All	41%
2014/15	Full-Time	46%
	Part-Time	43%
	All	46%
2015/16	Full-Time	41%
	Part-Time	48%
	All	42%
Benchmark	Full-Time	39%

**Data Set 1b:** The percentage of registered Computer Science undergraduate students by gender over time.

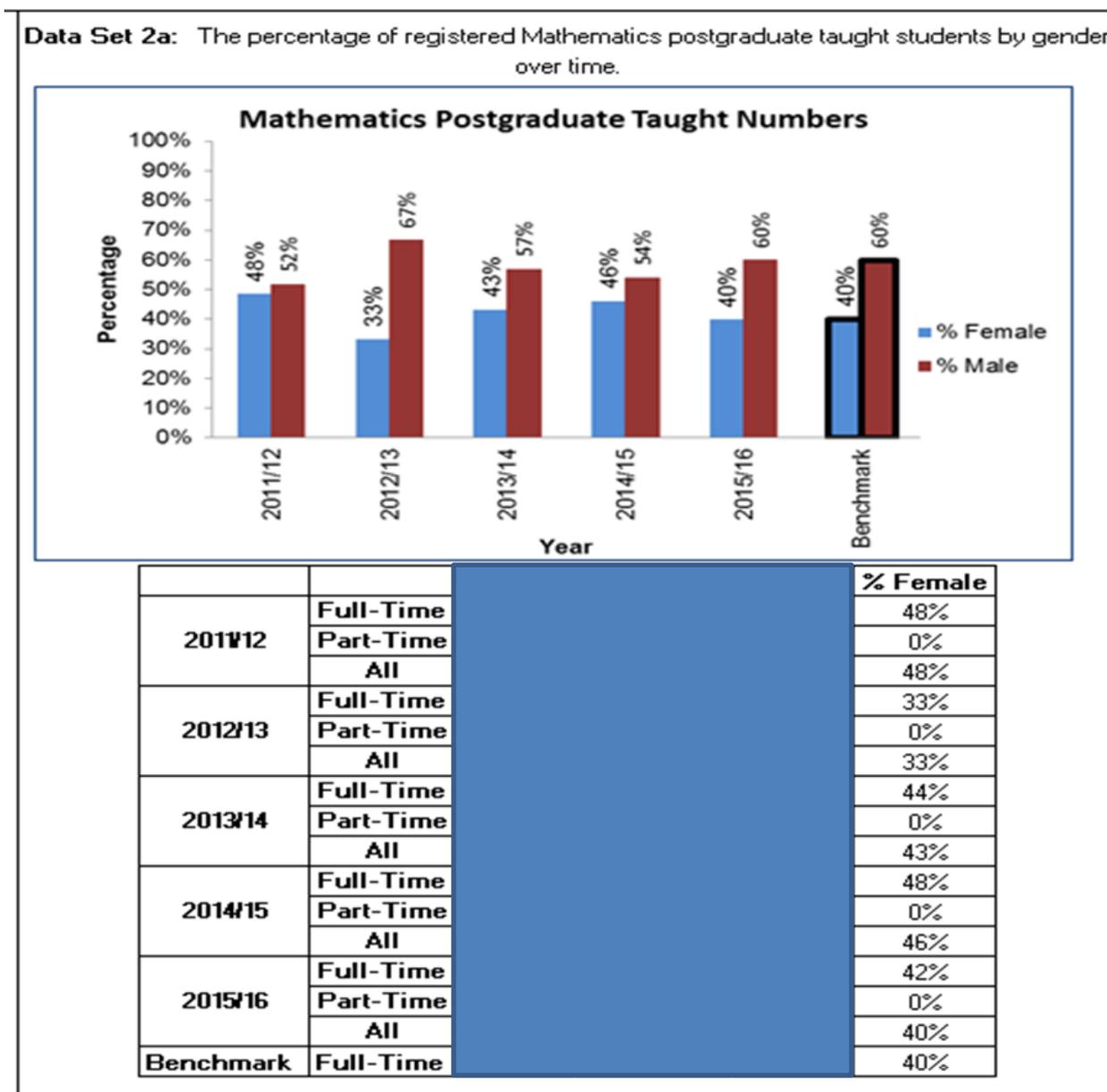


		% Female
2011/12	Full-Time	20%
	Part-Time	0%
	All	20%
2012/13	Full-Time	19%
	Part-Time	0%
	All	19%
2013/14	Full-Time	15%
	Part-Time	0%
	All	15%
2014/15	Full-Time	16%
	Part-Time	0%
	All	16%
2015/16	Full-Time	16%
	Part-Time	0%
	All	16%
Benchmark	Full-Time	15%

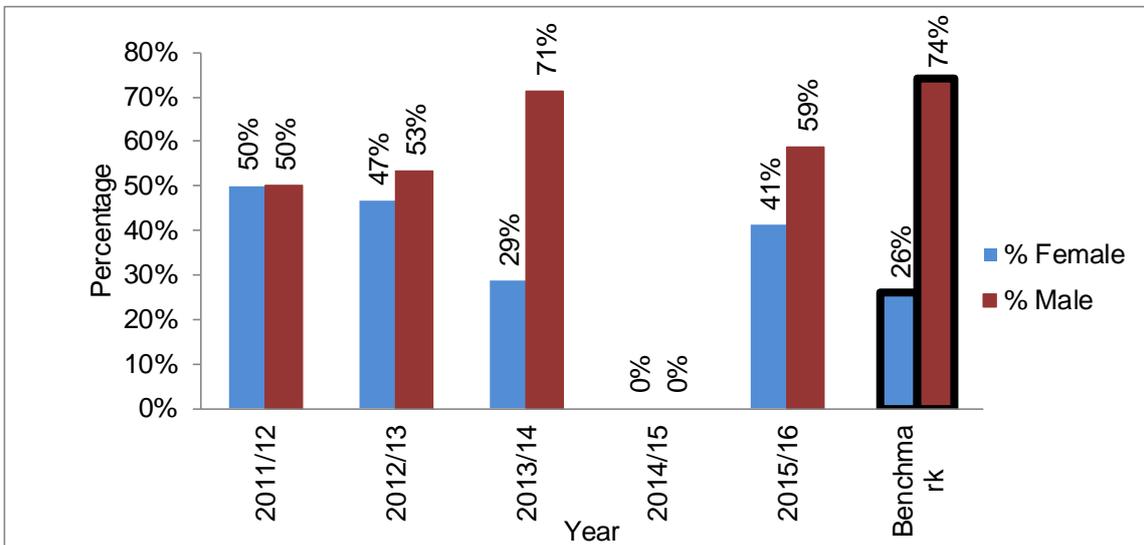
(iii) **Postgraduate male and female numbers completing taught courses – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.**

The proportion of mathematics female PGT students (dataset 2a) are broadly in line with our undergraduate proportions at 40% (benchmark 40%). Part-time study has historically been taken up by males in mathematics (AP2.1). Data are sporadic for CS (dataset 2b) due to changes in MSc offering and fluctuating applications, but the proportion is higher than for the undergraduate course or the benchmark.

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**Data Set 2b:** The percentage of registered Computer Science postgraduate taught students by gender over time.



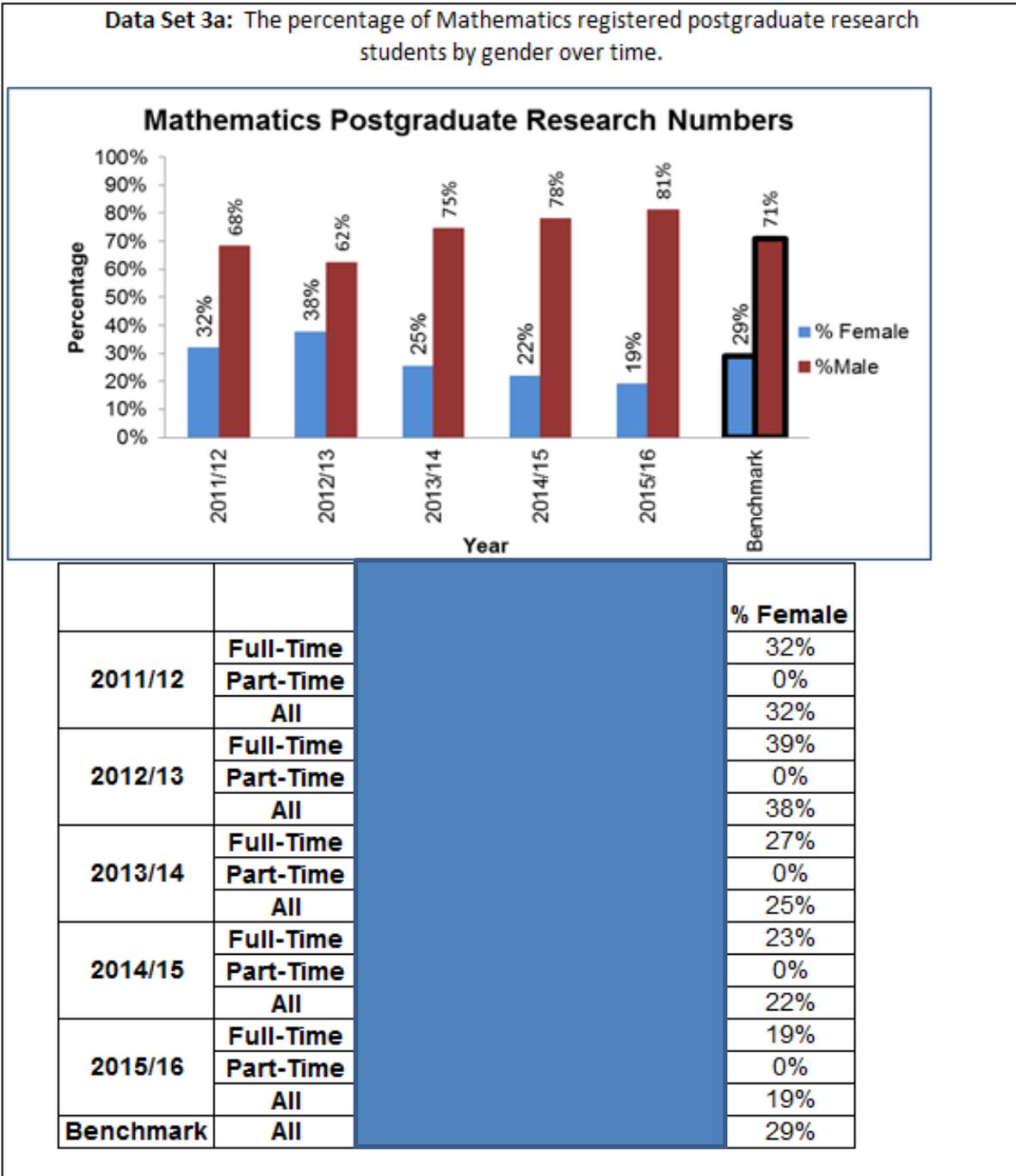
Year	Category	% Female
2011/12	Full-Time	0%
	Part-Time	0%
	All	0%
2012/13	Full-Time	13%
	Part-Time	0%
	All	13%
2013/14	Full-Time	60%
	Part-Time	0%
	All	60%
2014/15	Full-Time	0%
	Part-Time	0%
	All	0%
2015/16	Full-Time	30%
	Part-Time	0%
	All	30%
Benchmark	Full-Time	26%

(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.**

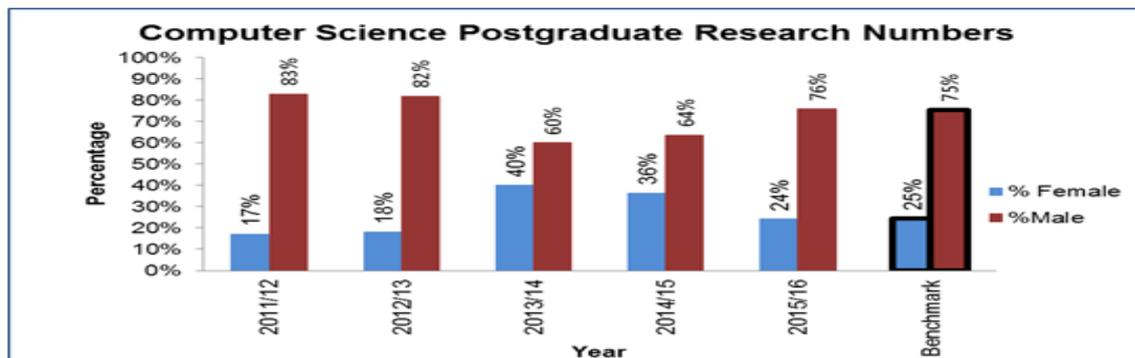
PGR data are in datasets 3a (mathematics) and 3b (CS). Between 2012/13 and 2015/16 the proportion of female Maths PGRs has fallen to 19% (below the 29% benchmark), in contrast to rising undergraduate numbers. The reason for this is not clear and we are working with Exeter's Doctoral College (established Nov. 2015) to investigate whether this is a

wider trend and implement actions to increase female PGR numbers (AP2.1;2.2). **100% of our PGR recruiters and supervisors have undertaken recruitment and selection and equality and diversity training (AP2.3)**, and since 2015/16 we are more actively encouraging our undergraduates and PGT students to apply for PGR studentships (AP2.16). **Positively, in CS female PGR numbers have risen and the current proportion is well above the benchmark (24%) at 36%.**

[Word count = 126]



**Data Set 3b: The percentage of Computer Science registered postgraduate research students by gender over time.**



		% Female
2011/12	Full-Time	17%
	Part-Time	0%
	All	17%
2012/13	Full-Time	20%
	Part-Time	0%
	All	18%
2013/14	Full-Time	50%
	Part-Time	0%
	All	40%
2014/15	Full-Time	40%
	Part-Time	0%
	All	36%
2015/16	Full-Time	25%
	Part-Time	0%
	All	24%
Benchmark	Full-Time	25%

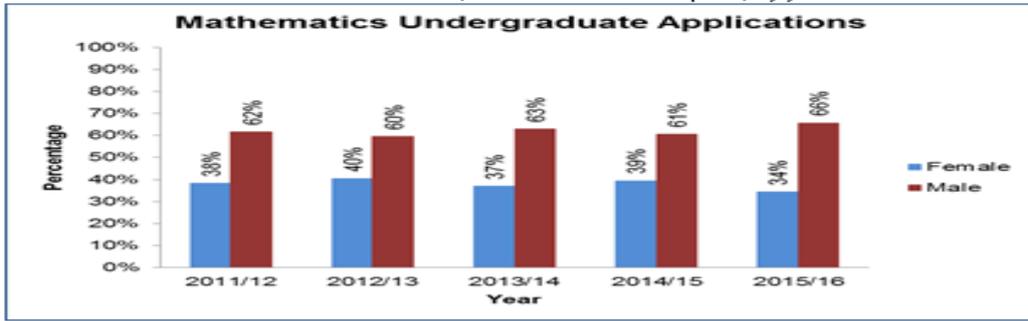
(v) **Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees** – comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect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

**Undergraduate:**

The proportion of female math’s applicants (dataset 4a) has remained just below 40% between 2011/12-2014/15 (in line with the proportion of women taking A level mathematics -39%; WISE UK Statistics 2014). In 2015/16 female applications fell to 34%. We will monitor this to see whether it is an anomaly and are actively enhancing our female-targeted undergraduate recruitment strategies (AP2.1;2.13). The offer rate is similar for both males (94%) and females (96%) with on average slightly more males than females accepting (m=29%; f=25%) in 2015/16 in contrast to previous years. In CS we see a fall in the proportion of women applying from 2014/15 (15%) to 2015/16 (13%) that corresponds with the expansion of the undergraduate course. The proportion of CS females offered and accepting places has historically been the same as for males (79% offered, 21% accept). Based on these figures we have focused our efforts on attracting female CS undergraduates AP2.1-2.9 and as part of our ‘filling in the gaps’ we have targeted outreach activities to encourage females to study mathematics and CS (AP8.1-8.5) (see pg.52, 56-57).

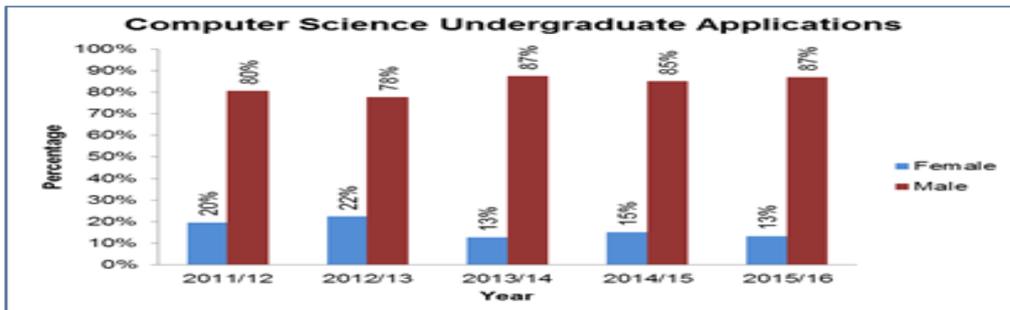
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**Data Set 4a:** The percentage of Mathematics undergraduate females who applied, who received offers, and who were accepted, by year.



Year	App to Offer		Differ to Accept
	Female	Male	
2011/12	Female	90%	25%
	Male	89%	29%
	Total	89%	28%
	% Female		
2012/13	Female	94%	33%
	Male	94%	27%
	Total	94%	29%
	% Female		
2013/14	Female	96%	28%
	Male	91%	28%
	Total	92%	28%
	% Female		
2014/15	Female	96%	27%
	Male	94%	23%
	Total	95%	24%
	% Female		
2015/16	Female	94%	25%
	Male	92%	29%
	Total	93%	27%
	% Female		

**Data Set 4b:** The percentage of Computer Science undergraduate females who applied, who received offers, and who were accepted, by year.

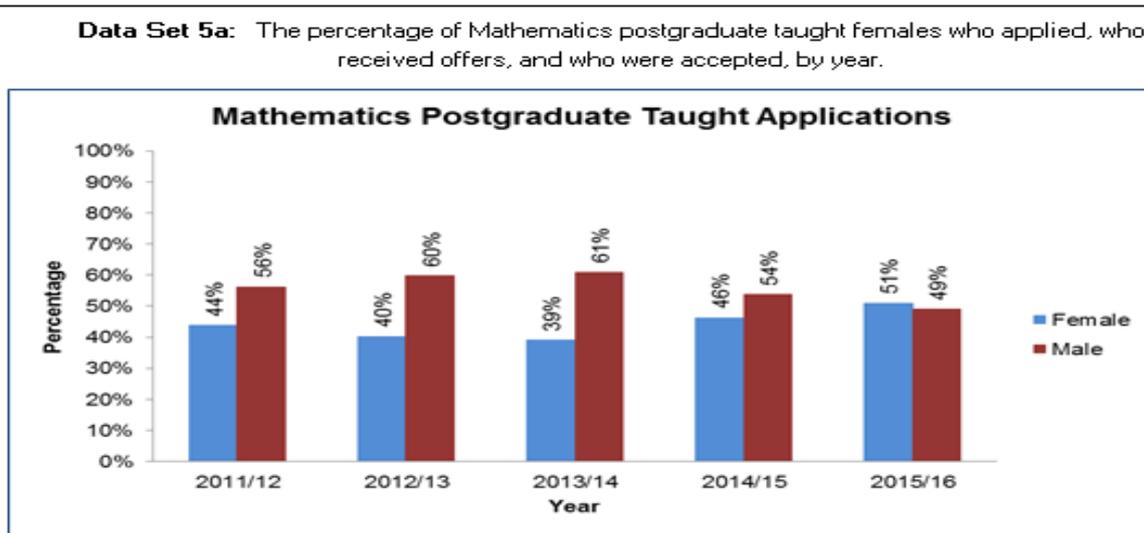


Year	App to Offer		Differ to Accept
	Female	Male	
2011/12	Female	81%	29%
	Male	79%	23%
	Total	79%	24%
	% Female		
2012/13	Female	85%	29%
	Male	69%	25%
	Total	73%	26%
	% Female		
2013/14	Female	79%	18%
	Male	75%	20%
	Total	75%	20%
	% Female		
2014/15	Female	87%	22%
	Male	85%	20%
	Total	85%	20%
	% Female		
2015/16	Female	82%	22%
	Male	78%	21%
	Total	79%	21%
	% Female		

**Postgraduate Taught:**

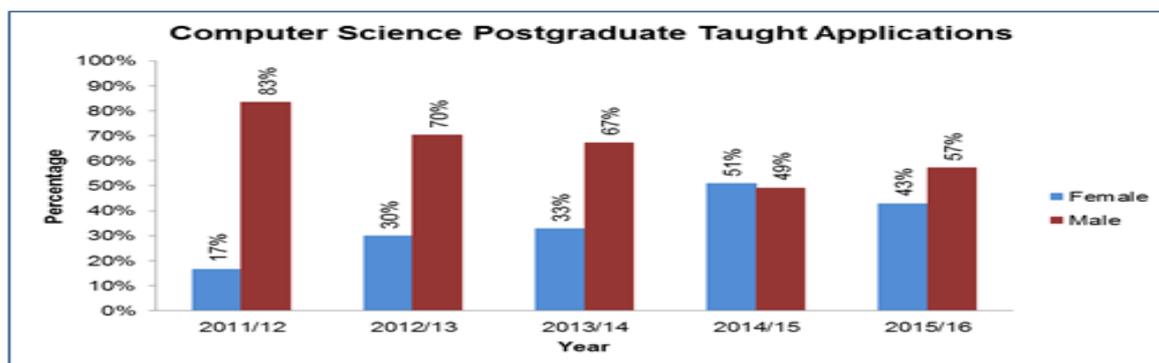
For PGT application in mathematics (dataset 5a) the picture is similar to undergraduate. The proportion of application to offer is higher for women but the offer to acceptance is lower. The numbers are relatively small but it is something we will monitor and investigate (AP2.1; 2.16). The figures for CS (dataset 5b) positively show an increase in the proportion of female applicants from 17% in 2011/12 to 43% in 2015/16, indicating our Bronze actions (AP2.1) could be having an impact in attracting PGT females.

[Word count = 63]



			App to Offer	Offer to Accept
2011/12	Female	[Redacted]	43%	18%
	Male		36%	20%
	Total		39%	19%
	% Female			
2012/13	Female		69%	13%
	Male		49%	19%
	Total		57%	16%
	% Female			
2013/14	Female		68%	15%
	Male		48%	16%
	Total		56%	15%
	% Female			
2014/15	Female		71%	13%
	Male		58%	19%
	Total		64%	16%
	% Female			
2015/16	Female	63%	9%	
	Male	50%	13%	
	Total	56%	11%	
	% Female			

**Data Set 5b:** The percentage of Computer Science postgraduate taught females who applied, who received offers, and who were accepted, by year.



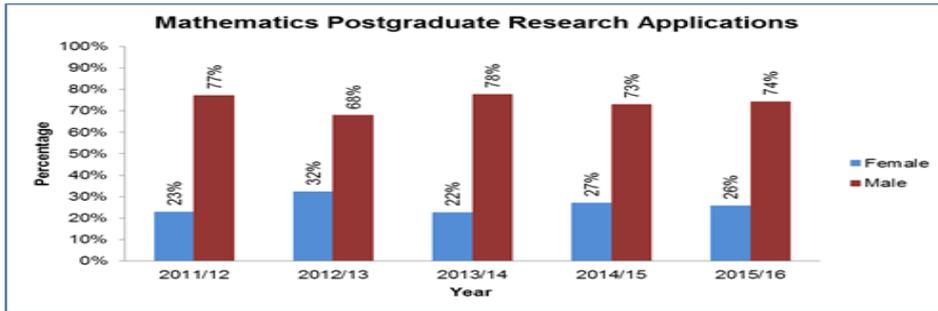
		App to Offer	Offer to Accept
2011/12	Female	50%	25%
	Male	73%	10%
	Total	69%	12%
	% Female		
2012/13	Female	61%	5%
	Male	68%	10%
	Total	66%	9%
	% Female		
2013/14	Female	59%	11%
	Male	34%	5%
	Total	42%	8%
	% Female		
2014/15	Female	70%	15%
	Male	48%	9%
	Total	59%	13%
	% Female		
2015/16	Female	78%	8%
	Male	65%	16%
	Total	71%	12%
	% Female		

### Postgraduate Research:

The mathematics figures (dataset 6a) show that the proportion of female applicants (32% 2012/3 vs 26% 2015/6) has not fallen as much as the proportion of PGRs (38% 2012/3 vs 19% 2015/6). The proportion of offers made to women is erratic; 57% (2012/3); 5% (2013/14); 15% (2014/5). Since Sept 2015 female offers have increased to 24% and we are still recruiting. We have noted that the decline in female applications has coincided with the change in Research Council funding for PGRs and the setting up of Doctoral Training Programmes. There have been consequent changes in the way we recruit, for example more students now have to undertake a formal interview and may have supervision split with other GW4 institutions. Following the 2012 review of our PGR recruitment processes (AP2.2), **all our PGR recruiters have undertaken Recruitment and Selection Training (AP2.6)**, and we are developing unconscious bias training and materials for all staff. The Doctoral College is looking to improve its gender data collection across all the possible PGR recruitment channels so we can understand if we get different gender-related drop-offs across the different channels (AP2.2). The increase in the proportion of offers this year may reflect these efforts. The figures for CS (dataset 6b) are more encouraging (given the low numbers of women at undergraduate level).

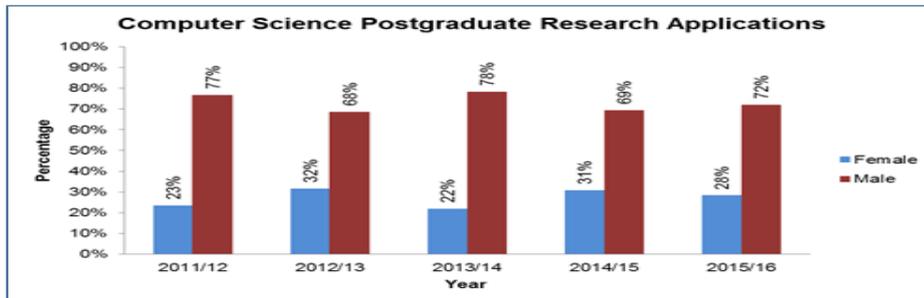
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**Data Set 6a:** The percentage of Mathematics postgraduate research females who applied, who received offers, and who were accepted, by year.



Year	Applicants		App to Offer	Offer to Accept
	Female	Male		
2011/12	Female	77%	55%	100%
	Male	23%	35%	100%
	Total	100%	40%	100%
	% Female	61%	50%	
2012/13	Female	68%	71%	60%
	Male	32%	25%	47%
	Total	100%	40%	54%
	% Female	74%	56%	
2013/14	Female	78%	10%	100%
	Male	22%	57%	74%
	Total	100%	46%	76%
	% Female	15%	57%	
2014/15	Female	73%	22%	25%
	Male	27%	46%	69%
	Total	100%	40%	62%
	% Female	32%	27%	
2015/16	Female	74%	29%	80%
	Male	26%	33%	75%
	Total	100%	32%	76%
	% Female	47%	52%	

**Data Set 6b:** The percentage of Computer Science postgraduate research females who applied, who received offers, and who were accepted, by year.



Year	Applicants		App to Offer	Offer to Accept
	Female	Male		
2011/12	Female	77%	36%	50%
	Male	23%	17%	33%
	Total	100%	21%	40%
	% Female	69%	60%	
2012/13	Female	68%	22%	50%
	Male	32%	3%	100%
	Total	100%	9%	60%
	% Female	90%	33%	
2013/14	Female	78%	48%	17%
	Male	22%	27%	8%
	Total	100%	31%	11%
	% Female	64%	67%	
2014/15	Female	69%	50%	29%
	Male	31%	25%	63%
	Total	100%	33%	47%
	% Female	66%	31%	
2015/16	Female	72%	17%	50%
	Male	28%	25%	73%
	Total	100%	22%	68%
	% Female	40%	41%	

(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.

**Undergraduate:**

Dataset 7a shows that in mathematics female undergraduates outperform males (the proportion of firsts and 2:1s for women is higher than the proportion of women on the course - 2013/14 seems to be an anomaly with a slightly lower proportion). Since the expansion in the CS undergraduate programme only happened two years ago the larger cohort has not yet graduated so the figures presented are for the previous course (Dataset 7b). Given the small numbers the proportion of firsts and 2:1s is similar to the proportion on the course. However, a 2012 survey (AP1.6) of our undergraduates indicated that females tended to be less confident about their academic performance than males and we implemented actions (AP2.1;2.5;2.12;2.14 – see pg.15, 41-43). The 2015 repeat survey indicated these have had a positive impact with fewer gender differences compared to two years ago. It did find women in STEM report a lack of role models, which is likely to affect their goals and motivations so we have implemented actions (AP8.1-8.5), and found that women were less likely to report intentions to study for an advance degree so we have created AP2.16.

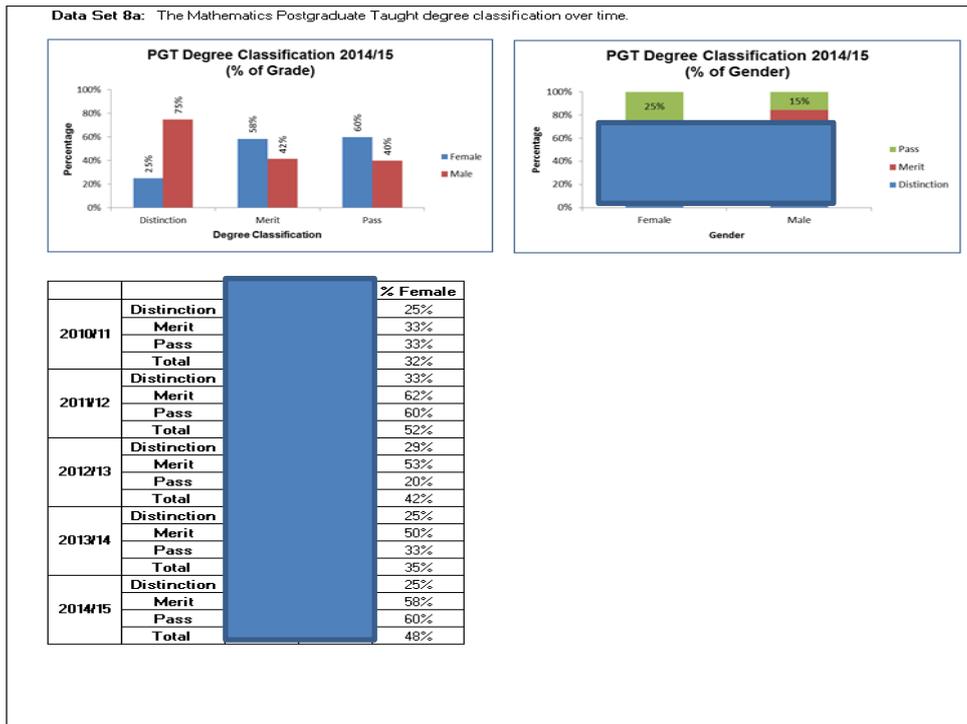
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**[Data set 7a and 7b: The Mathematics and CS Undergraduate Degree Classifications Over Time – removed]**

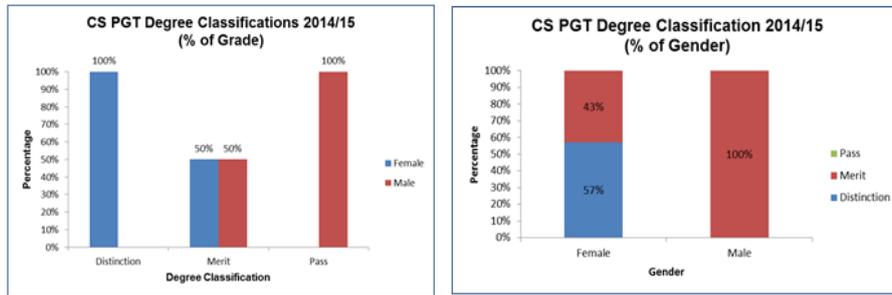
**Postgraduate Taught:**

For Maths (dataset 8a) the proportion of distinctions for women is lower than expected while for merit and pass it is higher. This is consistent through time. For CS (dataset 8b) women appear to outperform men.

[Word count = 37]



**Data Set 8b:** The Computer Science Postgraduate Taught degree classification over time.



Year	Grade	% Female
2010/11	Distinction	0%
	Merit	50%
	Pass	100%
	Total	50%
2011/12	Distinction	0%
	Merit	0%
	Pass	0%
	Total	0%
2012/13	Distinction	0%
	Merit	50%
	Pass	0%
	Total	50%
2013/14	Distinction	0%
	Merit	75%
	Pass	0%
	Total	60%
2014/15	Distinction	100%
	Merit	50%
	Pass	0%
	Total	70%

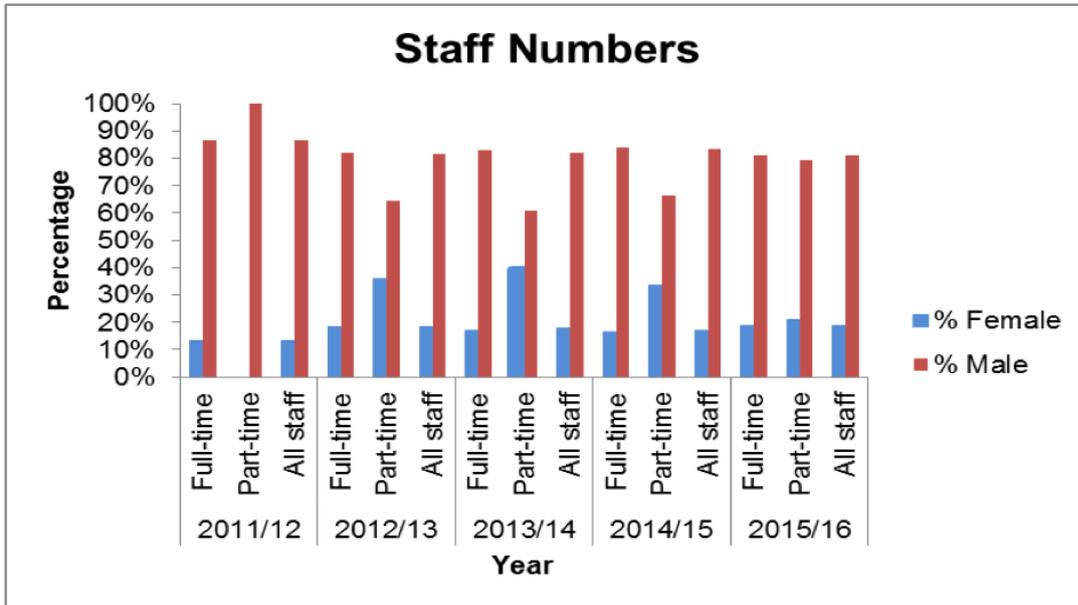
## Staff data

(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

Given the relatively small numbers of CS staff (15 out of 108) and similar benchmarks, in the remainder of this section we do not separate CS from mathematics data. All staff share Departmental meetings and are culturally one.

Datasets 9 and 10 give the numbers and proportion of women for all grades and by job family. Figures by grade are given in dataset 11b. Since 2011/12, we have increased our female staff from 12% to 19% (benchmark 22.9% mathematics, 22.2% CS). The proportion in E&R posts (dataset 10) has risen from 3% to 12%. The proportion in 'R-only' varies between 25%-36% but shows no trend. We have few E&S staff so there is high variation with no discernable trend. The rate of recruitment (number of women appointed as a proportion of jobs advertised) is 32%. **Dataset 11b shows increases at F (lecturer) from 12% to 21%, G (senior lecturer) from 10% to 16% and professorial level, from 0% to 9%.** Since the promotion of one female H (Associate Professor) to Professor, H has dropped from 20% to 0%. We will continue to expand the number of senior females via our actions aimed at recruitment (AP4.1-4.6) and progression (AP5.1-5.3)

**Data Set 9:** Number of academic and research staff over time.

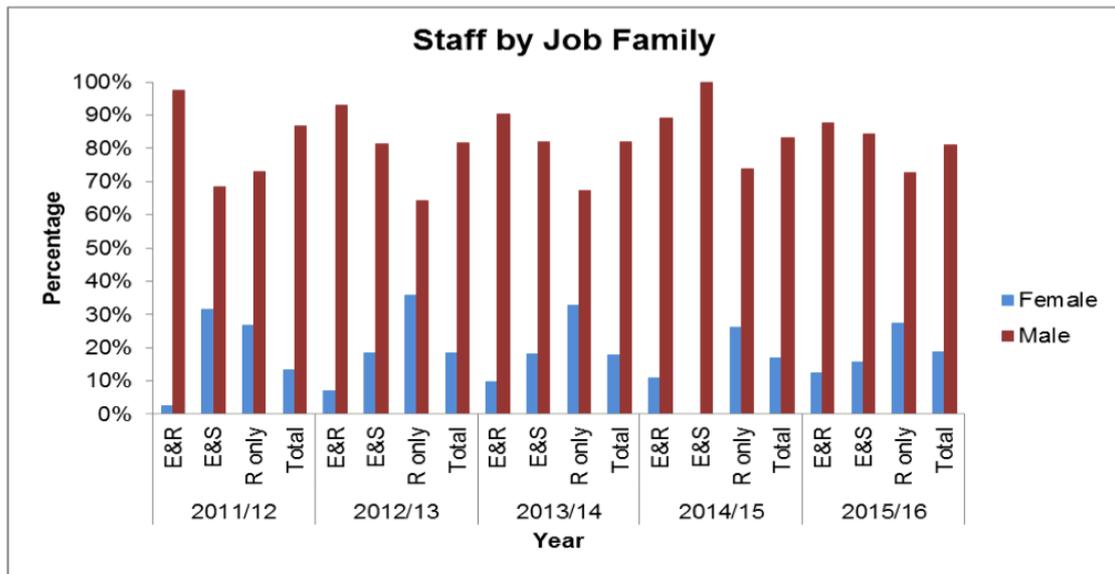


Year	FTE	% Female
2011/12	Full-time	13%
	Part-time	0%
	All staff	13%
2012/13	Full-time	18%
	Part-time	36%
	All staff	18%
2013/14	Full-time	17%
	Part-time	39%
	All staff	18%
2014/15	Full-time	16%
	Part-time	34%
	All staff	17%
2015/16	Full-time	19%
	Part-time	21%
	All staff	19%

### Staff Numbers

Year	Mathematics	Computer Science
2011/12		
2012/13		
2013/14		
2014/15		
2015/16		

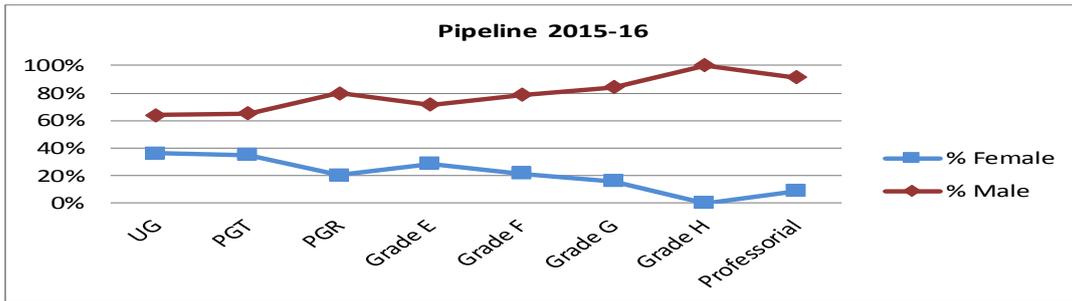
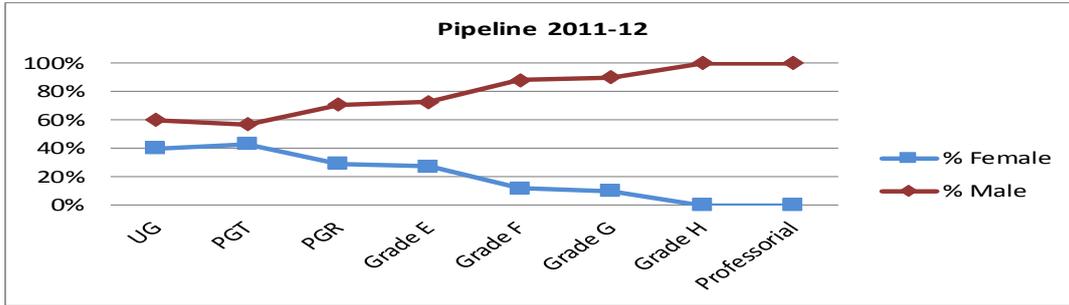
**Data Set 10: Number of staff by career path**



Year	Job family	Female
2011/12	E&R	3%
	E&S	32%
	R only	27%
	Total	13%
2012/13	E&R	7%
	E&S	19%
	R only	36%
	Total	18%
2013/14	E&R	10%
	E&S	18%
	R only	33%
	Total	18%
2014/15	E&R	11%
	E&S	0%
	R only	26%
	Total	17%
2015/16	E&R	12%
	E&S	16%
	R only	27%
	Total	19%

Dataset 11 shows a comparison of the pipeline for 2011/2012 against 2015/16. From the dataset it appears that the proportion of undergraduates has fallen. From 2011/12 to 2015/16 the proportion of CS student has risen from 5% to 21% so the lower proportion of women studying CS (16% female) as opposed to maths (42% female) impacts the overall undergraduate gender balance and we are focusing our efforts on recruiting female CS undergraduates (AP2.16). We are addressing the fall in female PGR numbers (see pg.24 and 44). The number of staff in MCS has increased since 2012/13, indicating our recruitment strategies (AP4.1-4.3) are impactful. The proportion of women in band E (R-only staff on short term research contracts) has fluctuated annually.

**Dataset 11: Academic progression charts by grade 2011/12-2015/16**



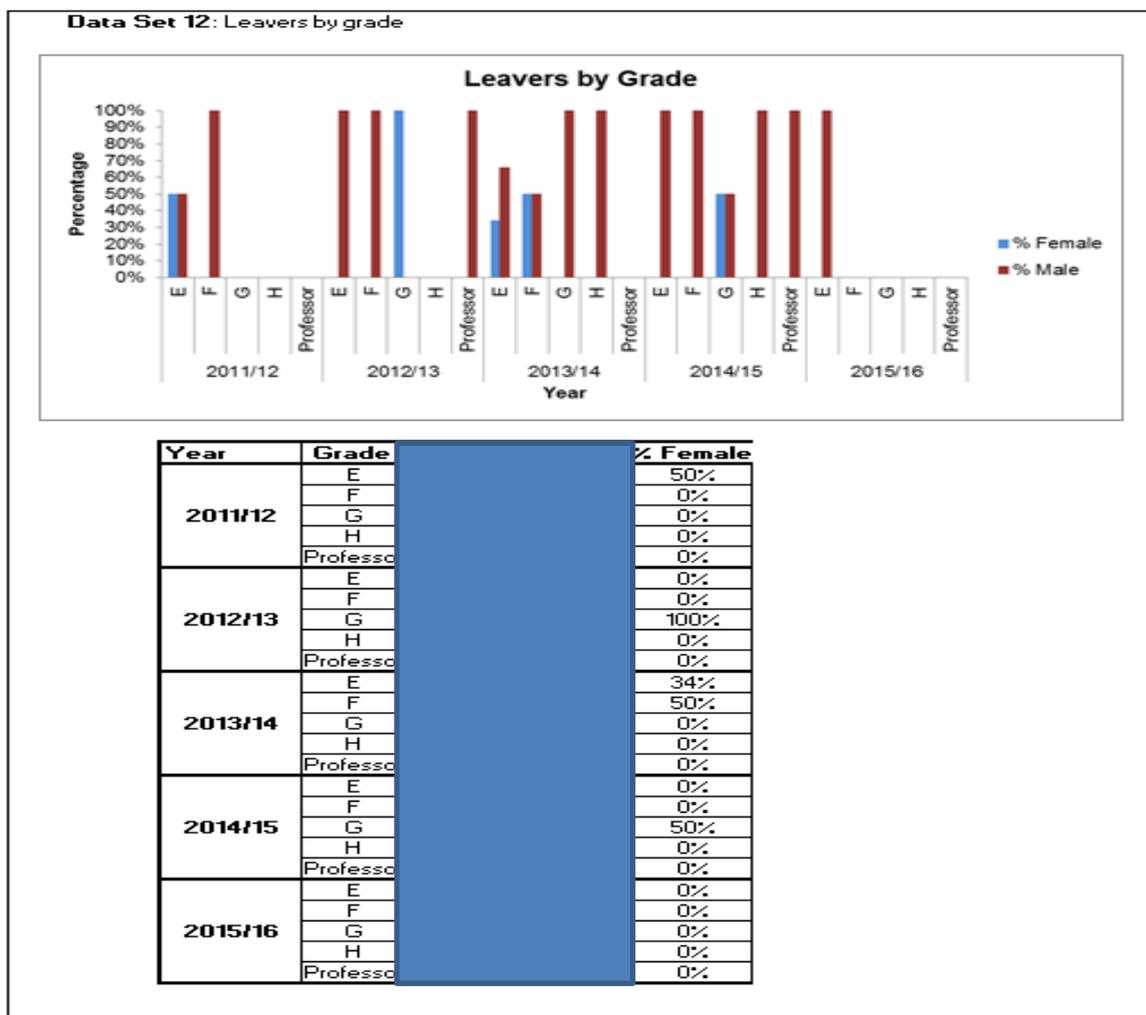
Year	Grade	% Female	% Male
2011/12	E	27%	73%
	F	12%	88%
	G	10%	90%
	H	0%	100%
	Professor	0%	100%
2012/13	E	36%	64%
	F	17%	83%
	G	12%	88%
	H	20%	80%
	Professor	0%	100%
2013/14	E	23%	77%
	F	28%	72%
	G	12%	88%
	H	20%	80%
	Professor	5%	95%
2014/15	E	31%	69%
	F	14%	86%
	G	13%	88%
	H	0%	100%
	Professor	9%	91%
2015/16	E	29%	71%
	F	21%	79%
	G	16%	84%
	H	0%	100%
	Professor	9%	91%

[Word count = 317]

(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.

Since 2009/10 15 E&R staff (13% female), three in E&S (66% female) have left. These figures include retirements and end of contracts. All E&R and E&S staff who have left have either retired or gone to other jobs in the academic sector, usually at a higher grade. 16 R-only staff (19% female) have left, with their high turnover linked to the ending of short-term contracts. All staff are offered an exit interview with the Human Resources Business Partner (HRBP) and a central University Exit Questionnaire but take up is low (AP3.8). The percentage of staff leaving who are female is 15% for E&R and 23% for R-only which is consistent with the proportion of female staff. Dataset 12 indicates more male staff leave. If we look at the figures for staff joining we have had 56 appointments in MCS over the same period of whom 18 are female (32%). This shows that we are recruiting at a rate (32%), which is above the benchmark figure for female staff numbers (23%).

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

##### Key career transition points

- a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.
  - (i) **Job application and success rates by gender and grade** – comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

After identifying the need for accurate recruitment data which captures all research and academic staff appointments, since July 2014 all posts are recruited and monitored through e-recruitment (AP1.1; 4.2).

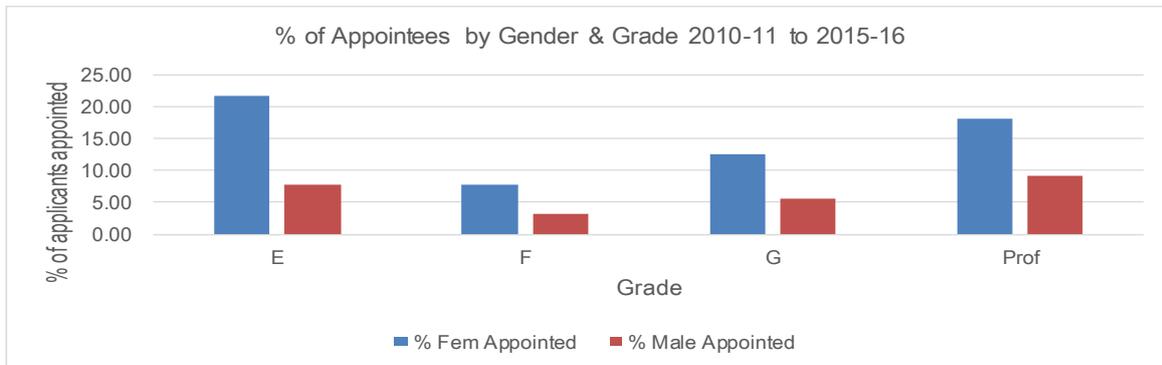
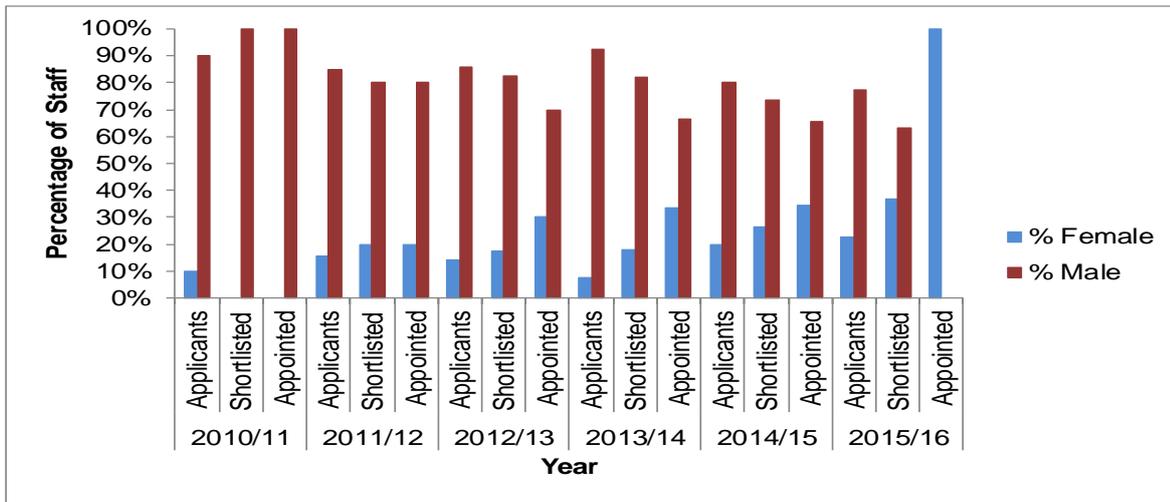
For Bronze we identified that we needed to attract more female candidates to all our posts. Since then we have:

- Advertised all vacancies with links to our family friendly policies and information on “Working Here” benefits and experiences (AP4.2);
- **Increased Equality and Diversity training completion to 95.6% compliance** (AP6.10);
- Offered all unsuccessful internal candidates feedback (AP4.3);
- Used template adverts, job descriptions and person specifications for all academic and research appointments. Each job includes a range of key duties which recognises education, pastoral and welfare roles as well as the traditional research elements of academia. These are recognised in our Workload model (AP1.6);

**Indicating the impact of our actions, Dataset 13 shows from 2013/14 - 2014/15 approximately 35% of female candidates shortlisted were appointed while in 2015/16 female candidate success rate was 100%. The percentage of female shortlisted candidates has increased from 17% in 2012/2013 to 37% in 2015/2016. A greater proportion of females were appointed at every grade between 2010/11-2015/16. We also internally recruited 1 female Research Fellow to a CS Lecturer position (see case study 2).**

[Word Count = 210]

**Data set 13: Staff applicants, shortlisted, appointed**



Year	Stage	% Female	% Male
2010/11	Applicants	10%	90%
	Shortlisted	0%	100%
	Appointed	0%	100%
2011/12	Applicants	15%	85%
	Shortlisted	20%	80%
	Appointed	20%	80%
2012/13	Applicants	14%	86%
	Shortlisted	17%	83%
	Appointed	30%	70%
2013/14	Applicants	7%	93%
	Shortlisted	18%	82%
	Appointed	33%	67%
2014/15	Applicants	20%	80%
	Shortlisted	26%	74%
	Appointed	35%	65%
2015/16	Applicants	22%	78%
	Shortlisted	37%	63%
	Appointed	100%	0%

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

Since 2014/15, **100% of eligible female academic staff have been promoted: one from Associate Professor to Professor (our first female staff member promoted to Professorial level) and two from Lecturer to Senior Lecturer (grade F-G)**. Dataset 14 illustrates how in 2013/14 there were two successful applications from female members of staff from grade E-F from a total of three applications, and two from grade F-G from a total of seven applications.

Applying for Bronze showed us the importance of appraisals for encouraging female candidates to apply for promotion (see mini case study 1 'Promotion Monitoring' pg.40) and **in 2014-15 we ensured 92% of all academic and research staff received an appraisal: 95% of E&R staff (100% of female E&R staff and 95% of male), 85% of R-only and 100% of E&S staff, received an appraisal (94% in 2014/15)**. Academic staff are appraised by their Academic Lead and R-only staff by their supervisor. Appraisal forms guide conversations to discuss promotion and prioritising workload and all appraisers receive training prior to carrying out an appraisal (AP5.2). Since Bronze our HoD now personally monitors, encourages, and mentors all female staff throughout their career and the promotions process (AP5.1). There are no restrictions on when in the year an individual can apply for promotion or caps on the number of promotions per annum.

To support and encourage women to apply for promotion, in particular during their mid-career, since Bronze we have:

- University-wide webpages for staff in academic roles that are split into 'You Teach' 'You Research' and 'You Teach and Research' containing detailed information on promotion criteria and the process for being considered for promotion;
- Monitored promotion rates annually (AP1.1);
- Found the Accrediting Staff Professionalism in Research Led Education (ASPIRE) programme for academics has proved useful in setting out the requirements for promotion and giving staff confidence to apply and set a target for 100% staff ASPIRE accreditations (AP3.4);
- Encouraged staff to attend Springboard Women's Development Programme enables women 'to identify the clear, practical and realistic steps that they want to take to make a better world for themselves at work and home'. We had 1 participant from MCS in 2014-15 (AP3.7);
- Funded three academic and professional services female staff on the Aurora Leadership Programme (see case study 2, pg.41). One female CS staff member is now an Aurora Role Model and following positive feedback two members of staff are currently undertaking this training who will act as further ambassadors for the programme and mentor future attendees (AP3.10).

We will continue these actions past Silver. Since Bronze we have contributed to the University-wide 'Exeter Academic' review and update of the E&S, E&R and R-only staff promotions criteria (launched April 2016) (see pg.40).

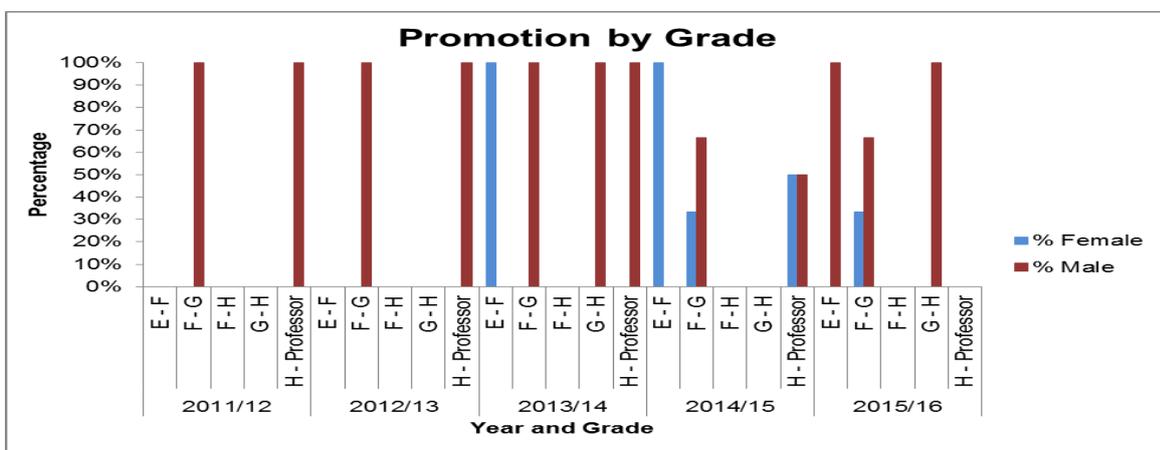
We have a range of support mechanisms to assist our cohort of ECRs to progress to academic posts, resulting in the successful internal recruitment of one female CS lecturer in 2014/15. These include the formation of the ECN which runs interview and promotions focused workshops, and promotes the University's Research Development training

(AP3.3;3.9;6.5;6.6;6.7;6.9). The Streatham and Penryn ECNs both operate cross-College with Leads in each Department.

Since Bronze our focus groups found staff wanted more opportunities for formal cross-College career development mentoring. Our feedback led to the formation of a 'mentoring task and finish group' (June 2015) and launch of CEMPS **One Step Beyond: Research and Academic Staff Mentoring Scheme** (October 2015) (AP1.3;3.7). The scheme allows mentees to self-select mentors of all genders from across the college or opt to be matched. The creation of this scheme is part of MCS' conscious attempt to further embed cultural change in MCS and across CEMPs. **Eight MCS mentors have signed up (25% female – both Professors). Ten Maths and two CS mentees have enrolled (25% female).** All mentors and mentees have the opportunity for training, and are provided with a mentoring guidebook.

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**Data Set 14: The number of promotions by grade over time**



Year	Grade	% Female
2011/12	E - F	0%
	F - G	0%
	F - H	0%
	G - H	0%
	H - Professor	0%
2012/13	E - F	0%
	F - G	0%
	F - H	0%
	G - H	0%
	H - Professor	0%
2013/14	E - F	100%
	F - G	0%
	F - H	0%
	G - H	0%
	H - Professor	0%
2014/15	E - F	100%
	F - G	33%
	F - H	0%
	G - H	0%
	H - Professor	50%
2015/16	E - F	0%
	F - G	33%
	F - H	0%
	G - H	0%
	H - Professor	0%

- 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

Since Bronze we have ensured our shortlisting, selection and criteria are open and transparent by:

- **Ensuring all interview panels are gender mixed**, drawing female staff from inside and outside MCS to not overburden our small number of senior females (AP4.3);
- **Embedding mandatory recruitment and selection training for all panelists. As of Feb 2016, 19 (87%) of Mathematics and three (100%) of CS recruiting staff have completed the Recruitment and Selection training (AP4.1);**
- Advertised all e-recruitment for all career paths to allow the collection of data and subsequent monitoring (AP1.1).

Although Dataset 13 suggests that our AS actions are having some impact in attracting high-quality female applicants, we recognise there is more to do. Since Bronze we have prepared for the University’s new cross-College Living System Institute’s recruitment campaign by: targeting advertisements on the Women in Science and Engineering (WISE) website; reviewing UoE’s webpages - ensuring they showcase our AS awards and positive working environment (AP4.4); gender de-coded the job adverts; produced Unconscious Bias literature for all panelists and recruited the ECU to conduct Unconscious Bias training for the senior academics and managers involved in the recruitment process (AP6.13). We have also worked with our external headhunters, ensuring they also monitor the gender balance of the shortlists they provide us with. We will monitor the impact of these actions when recruitment finishes in September 2016.

[Word count = 229]

- (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.

During our pathway to Bronze, we identified the key areas of attrition occur at Researcher to Lecturer, and Senior Lecturer to Associate Professorial/Professorial level.

For the transition from Researcher to Lecturer, we have an active ECN. It was launched in June 2014 in the form of a poster session where ECRs could present their research in a relaxed environment, alongside tea/coffee and lunch (49 attendees, of which 18 presented their posters). Besides networking and poster competition, the main outcome of the launch event was feedback from the ECRs which informed their career development events (AP3.3; 3.9).

Since Bronze our focus groups and wider research identified an issue in both attracting and keeping females after the Researcher career stage is the issue of Dual-Career partnerships (see Box 1, pg.38). Our informal survey revealed that

90% of MCS females have partners that are also in Academic or Professional careers and that 60% of these partners are living long distance. **The issue is not the partnership itself, but that academic or professional Dual-Career couples require two jobs together for both to pursue their careers and live in the same location.** To further understand the impact dual-career considerations may have on our academic and research staff we intend to take a formal survey of our academics, and use our findings to work with national and professional societies to investigate collecting institution-independent Dual-Career data (AP4.5).

**Box 1: Research informing Dual-Career Actions**

1. "Dual-Career Academic Couples: What Universities need to know" (Stanford University's Clayman Institute, 2008).
2. European Council of Doctoral Candidates and Junior Researchers (February 2014).
3. "Degrees of Separation" The Guardian (2010).

We have a number of mechanisms to support staff at these key career transition points. We continue to increase the gender balance across our seminars and make optimal use of visiting female role models. For example, allowing scheduled meetings ahead of seminars for PGRs and ECRs to ask questions without academic staff present to give greater opportunities for networking. We have been increasing the number of female speakers (internal and external) and positive role models are being profiled. **We have increased female speakers from 16% to 25% over the last 3 years (AP6.9 – dataset 15). We have information sessions on the options for supported teaching qualifications including ASPIRE (AP3.5) and funded 4 female staff to take Aurora (Leadership Foundation) training, receiving good feedback on its positive impact on female staffs career progression (see pg.40-41, AP3.10).**

**We have contributed to 'The Exeter Academic' promotions criteria review (AP5.3) (see pg.40)** and in October 2015 CEMPS launched the One Step Beyond: Staff Mentoring Scheme (AP3.7), after identifying having opportunities for mentoring outside of the Department as key for career development (see pg.35).

**[Data set 15: MC Colloquia and Seminars 2012-2016 – removed]**

[Word count: 411]

### 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?**

Our appraisal process has been in place across all career paths since 2002 and been reviewed three times. Appraisers are to undertake appraisal training and we monitor appraisal uptake annually (AP1.1;5.1).

**In 2014-15, 92% of all academic and research staff received an appraisal: 95% of Teaching and Research staff (100% of female Education and Research staff and 95% of male), 85% of Researchers, and 100% of Education and Scholarship staff.**

***[Mini Case Study 1: Promotion Monitoring – Removed]***

The appraisal covers academic work, pastoral care, outreach activities and AS responsibilities, and **have been impactful in identifying and encouraging staff to apply for promotion (see case study 1)**. We recognise the work involved in conducting appraisals within the workload model (AP1.6;6.12). Since Bronze we contributed to the University-wide review of the E&R, E&S and R-only promotion criteria. Based on AS feedback the modified criteria: more clearly include pastoral, outreach and mentoring roles; promotion and probation have been de-coupled to allow earlier job security for lecturers (at 3 rather than 5 years); the promotion criteria for R-only staff is easily accessible, and the criteria are pro-rata'd for part-time staff. Promotions workshops/briefings explaining the new criteria were run by the CEMPs HRBP in March 2016. Promotion criteria are publically available and clearly signposted on the new (March 2016) 'Exeter Academic' website. Since Bronze our HoD also personally monitors female staff promotions to offer even more insight and guidance (AP5.1). We will monitor the impact of these changes on progression and staffs' understanding of the promotion process and criteria (AP5.3).

[Word count = 347]

- (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?

Since Bronze all new staff have undergone a formal induction process. This includes a lunch with the Vice-Chancellor, New Starter meetings with the Dean and New Starter meetings for all career paths with the HoD. When new and existing staff move to a new role, we have in place a mandatory induction process, including information on mandatory Equality and Diversity, Recruitment and Selection and Appraiser training (which contributes to our increase in uptake). Staff are informed about the induction procedures in their appointment letters (ahead of commencing the role) and are allocated a trained Induction Facilitator and notified of this named contact prior their start date (AP3.1;3.2;3.2). There are three levels to the induction process; University level, College level and job specific level inductions. **The central induction survey measures the effectiveness of these inductions and results have been positive (AP3.1).**

We encourage and fund female staff to participate in the Aurora Leadership Programme if they wish to (AP3.10), with 3 participants since 2014. **We have received 100% positive feedback on its impact on them and their career progression (see case study 1, p.40). 1 female academic now acts as a national Aurora Role Model.** We will continue to offer funding for Aurora participants due to its evidenced positive impact on our female staff and their career progression.

***[Mini Case Study 2: The Aurora Experience – Removed]***

Since 2008 the University has offered the ASPIRE programme in which staff gain both a Higher Education Academy Fellowship and a UoE LTHE Fellowship simultaneously, at one of four levels: Associate, Fellow, Senior Fellow, or Principal Fellow (AP3.4). As of 2016, MCS has made having (or undertaking) a HEA Fellowship mandatory for all academic staff (AP5.7).

For R-only staff, the University's Researcher Developer Programme (which attained a HE Excellence in Research Award in 2013 and 2015) provides personal and professional development programmes to enhance their research and employability, in academia or elsewhere, with positive impact found (AP1.7;6.5;6.6;6.7).

Following feedback, our MCS' ECR Lead developed an Induction Handbook which will be trialed over the next year (AP1.6;3.2). This Handbook will be uploaded online and distributed alongside our current induction materials.

We have also developed a wider mentoring scheme for staff (see pg.35).

### [Word Count = 501]

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

### Undergraduate Support:

Our Destination of Leavers from Higher Education (DLHE) data (Dataset 16) indicates in CS a high proportion of female students consistently go on to graduate level employment or study. For Mathematics the female destination score has gone up steadily since 2008/2009. The level is not markedly different between genders. However, our 2012 Undergraduate Student Survey found female undergraduates lose more confidence and feelings of 'fitting in' over the duration of the studies (AP1.4). Since the 2012 survey, we used our AS Bronze Actions to tackle this in more depth with positive results (discussed below):

#### ***[Data set 16: Destination of Higher Education Leavers Data removed]***

We have promoted (and continue to promote) career and leadership development schemes to all undergraduates. 'Sprint' (a University level female-only leadership course) was piloted in 2014/2015. **Based on positive feedback, the University is now funding Sprint for 3 more years. 5 undergraduates attended in 2014/15, and 4 in (2015/16) (see dataset 17).** This is nominally 10% (2014-15) and 8% (2015-16) of the course attendees. Course spaces are limited and open to all undergraduates across the University (AP2.14).

#### ***[Data set 17: participation in Career Zone Undergraduate Leadership and Mentoring Schemes and Employability Events Removed]***

We will continue to increase the visibility and accessibility of female role models and mentors to increase female undergraduates' feelings of 'fit' with the discipline. Since Bronze we have done this via increasing the proportion of

female speakers in informal research talks to undergraduates (AP6.9;6.11;7.11) and ensuring that our outreach and open day staff and supporting students are gender mixed (AP2.1;6.1;6.8;8.1;8.3;8.4).

Our 'Career Zone' on campus provides a range of support mechanisms from dedicated careers and employment staff for students thinking about future career choices, including booking onto employability events. Data shows wide participation of our female students in these events (see dataset 17) (AP2.14).

We are aiming to further encouraging our female undergraduates into postgraduate study by (AP2.16; 8.3):

- Increasing the number of female supervisors to submit proposals for 3<sup>rd</sup>-year or Master Thesis projects;
- Promoting summer research bursary projects to female undergraduates and 4-year Maths programmes takers;
- Increasing the number of academia focussed careers events for undergraduates and postgraduates through engaging our PGR alumni with a 'PGR Alumni LinkedIn'.

[Word count = 341]

### Postgraduate Support:

In April 2016 the University launched its Doctoral College, which stimulates, supports and sustains a vibrant research and intellectual environment across and between disciplines for PGRs and ECRs. The Doctoral College has introduced more well-being support for PGRs including access to the Care First package that staff have access to - the rationale being that many PGRs have similar issues to staff i.e. work life balance, parenting, and carer roles. The Doctoral College have included gender as a key variable in the Annual Student Experience Review process which looks at equality in funding, progression, and experience (AP2.2; 2.4). All PGR students are assigned 30 hours to undertake training, development and employability activities per annum. In MCS a PGR representative attends all Departmental meetings (AP2.9).

All MCS PGR students have a mentor, with a strong pastoral role. **As a consequence of our Bronze award Action Plan PGR students choose their own mentor rather than have one assigned and this has received positive feedback.** Mentoring is formally recognised in the workload model (AP2.6).

To increase the visibility of senior role models, for Bronze we aimed to gender balance our colloquia and seminar series speakers and dataset 15 indicates the positive impact of this and we intend to improve it further (AP6.9). We have updated our outward-facing web pages to show commitment to AS principles and ensure the promotion of role models and achievements by female students and staff (AP2.2; 6.4; 8.4).

Our "Researcher Development Programme" provides PGR students and ECRs with personal and professional support to enhance their research and employability, in academia or beyond (AP6.5). Its "Researcher Toolkit" houses comprehensive research-career relevant information, including funding opportunities and support/resources available to staff and PGRs. The "MyPGR" online record system ensures PGRs receive high and consistent levels of support (AP2.3; 2.11; 6.6). **Since providing this support mechanism we have seen an increase with 80% of female PGRs and 79% of female Research staff now accessing these resources in 2012/13. 100% of our PGR supervisors have undergone Equality and Diversity Training,** and further specialist supervisor training is being developed (AP2.4). We also have resources in place to support those PGRs who need to take leave (AP2.7).

[Word Count = 365]

## 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.

In our Bronze feedback we were advised to implement measures to improve gender balance on College and Department level decision-making Committees. As these committees' memberships are senior role-based, we have since targeted support for females interested in leadership through the Aurora Programme and mentoring (e.g. the Dean of College mentors one of our female professors, the appraisal process (AP5.1) and our One Step Beyond Mentoring Scheme (AP3.7), and actively support our female academics to take on leadership roles on national committees. We expect to see improvements in female representation on senior committees over time as our pool of senior female academics expands.

The gender balance of all committees within MCS falls between 12% and 50%. The MCS Departmental committee membership reflects the academic staff ratio of 12%. The Staff Student Liaison Committee (SSLC) ratio of 40% (see figure 3) reflects the undergraduate gender makeup. In 2014/15 the MCS SSLC won the Student Guild Award for best SSLC across the University, and [name removed] was shortlisted for best SSLC Chair.

[Word count = 169]

**Table 4: CEMPs and MCS Committee membership 2013/14 to 2015/16**

Committee Name	Purpose of Committee	Gender	2013/14		2014/15		2015/16	
			No	%	No	%	No	%
College Executive Group	College level strategic planning, resource allocation and decision making	Male	7	88%	9	82%	10	77%
		Female	1	13%	2	18%	3	23%
		Total	8		11		13	
College Management Group	College management and communication	Male	21	70%	35	85%	38	86%
		Female	9	30%	6	15%	6	14%
		Total	30		41		44	
College Education Strategy Group	College education strategic planning and decision making	Male	7	47%	9	56%	8	57%
		Female	8	53%	7	44%	6	43%
		Total	15		16		14	
Research and Knowledge Transfer Executive Group	College research strategic planning and decision making	Male	11	79%	11	85%	11	79%
		Female	3	21%	2	15%	3	21%
		Total	14		13		14	
College PGR Student/Staff Liaison Committee (PGR SSLC)	Staff and PGR student forum for communication and feedback	Male	12	55%				
		Female	10	45%				
		Total	22					
Student Partnership Board	College level Staff -Student forum for communication and feedback	Male	6	46%	11	55%	9	53%
		Female	7	54%	9	45%	8	47%
		Total	13		20		17	
Harrison Education Committee	Monitoring quality of teaching and learning and facilitative sharing of good practice	Male	17	85%	13	85%	13	85%
		Female	3	15%	2	15%	2	2%
		Total	20					
Maths and CS Executive	Departmental strategy steering group comprised of the HoD, Director of Research, Director of Education, Director of international and Development, and Director of CS.	Male	3	0	4	100%	4	80%
		Female	0	0	0	0%	1	20%
		Total						
Maths / CS Discipline Meeting	Management, organisational and research issues	Male	30	83%	56	88%	58	88%
		Female	6	17%	8	13%	8	12%
		Total	36		64		66	
Maths / CS Staff Student Liaison Committee*	Maths and CS Staff -Student forum for communication and feedback	Male	6	55%	N/A	N/A	N/A	N/A
		Female	5	45%	N/A	N/A	N/A	N/A
		Total	11		N/A		N/A	
Maths Staff-Student Liaison Committee	Maths-specific Staff -Student forum for communication and feedback	Male	N/A	N/A	11	65%	13	54%
		Female	N/A	N/A	6	35%	11	46%
		Total	N/A	N/A	17		24	
CS Staff-Student Liaison Committee	CS Staff-Student forum for communication and feedback	Male	N/A	N/A	12	86%	14	82%
		Female	N/A	N/A	2	14%	3	18%
		Total	N/A	N/A	14		17	
Maths and CS AS Working Group	Monitors and creates actions related to AS within MCS	Male	5	50%	5	45%	8	50%
		Female	5	50%	6	55%	8	50%
		Total	10		11		16	

\*Committee disbanded and split into subject-focused Student-Staff forums in 2014/15

- (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.

Dataset 18 shows in MCS, we have 59.5 permanent academic staff and 38.8 fixed-term, R-only pathway staff. Moving from fixed-term (researcher) to open-ended/permanent (lecturer) contracts is one of our identified 'gaps'. Whilst we have recruited more fixed-term staff, increasing female ECR numbers from 7 (14%) in 2011/12 to 14 (27%) in 2015/16, we have ensured support mechanisms are in place to help develop their skills to take on permanent roles at Exeter or other institutions such as:

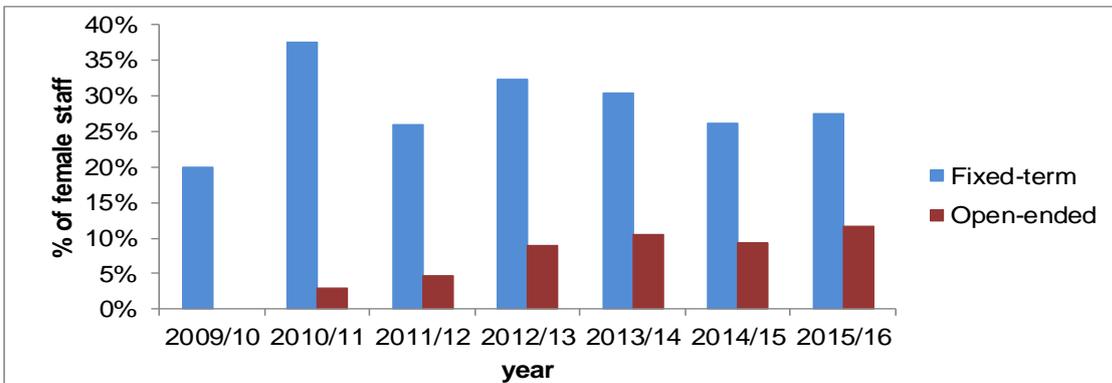
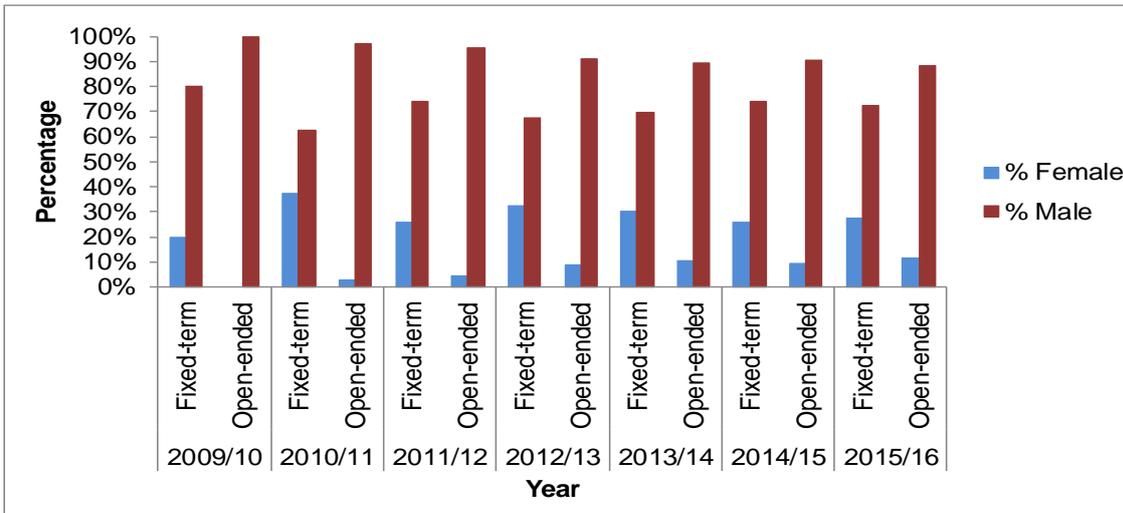
- The ECN which provides tailored support and workshops looking at ECR career progression (1.6; 3.2);
- **Developing the One Step Beyond Mentoring Scheme** particularly with ECRs in mind. 12 CEMPs ECRs are mentees - 2 from MCS (50% female) (AP3.7);
- The Researcher Development Programme (1.7; 6.5-6.7).

In 2013/14 we successful internally recruited one female ECR.

We have also focused on increasing the number of permanent female academic staff via recruitment and retention (AP4.1-4.3), **successfully increasing from 5% permanent female academics in 2011/12 to 12% in 2015/16. Two more female academic staff will join MCS in September 2016, bringing the percentage to ~15%.** We are undertaking further research into factors affecting female recruitment to MCS, targeting our recruitment campaigns at female staff (AP4.4;4.5;4.6).

[Word count = 201]

**Dataset 18: Staff by contract type for each gender over time**



Contract Type	Year	% Femal	% Male
Fixed-term	2009/10	14%	86%
	2010/11	38%	63%
	2011/12	27%	73%
	2012/13	34%	66%
	2013/14	32%	68%
	2014/15	26%	74%
	2015/16	27%	73%
	Benchmark		
Open-ended	2009/10	0%	100%
	2010/11	2%	98%
	2011/12	5%	95%
	2012/13	8%	92%
	2013/14	10%	90%
	2014/15	10%	90%
	2015/16	12%	88%

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

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

MCS has two decision-making committees: the AS working group (nine women and nine men), and the “Department Executive” which consists of and four Directors: CS, Education (which is role-shared), Research, and International & Development. The MCS Executive Group is the main decision-making committee within MCS. All academics (Senior Lecturer and above) are eligible to apply for Directorships, and the posts are widely advertised with selection by interview. 2015/16 saw gender balance increase from 0% to 20% female after [name removed] successful appointment as the first Director of International and Development.

Staff are actively supported and encouraged to take part in committees outside of MCS, increasing their visibility and efficacy as senior female role models, which is one driver for maintaining only two Departmental-level committees. For example, Professor Beth Wingate is a member of the EPSRC Strategy team for the UoE. She is also a member of the National EPSRC e-Infrastructure Strategic Advisory Team, and the High-Performance Computing Governance Board for NERC. In 2016 she is also a member of the Science Team putting together the Science and Business Case for Child of Archer, the national High Performance Computing hardware. We are conscious of our currently small pool of senior women’s administrative workload which could impact on their capacity for academic research and our HoD actively monitors this; we provide opportunities for leadership to women, but we do not pressure them into being burdened with administrative roles (AP4.3).

[Word count = 238]

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

The ‘SWARM’ Workload Model is used as an approximate measure of every staff member’s workload across the academic year and breaks the workload down by type, including teaching, outreach, service, AS responsibilities and research. All members of staff receive 330 hours in which they can pursue all aspects of their research. SWARM helps to ensure that staff get recognition for the work they do, allows analysis of the gender split of workload allocation and provides a focus for mentor-mentee workload and promotion discussions (AP6.12). MCSASWG members receive up to 200 SWARM hours for AS activities with extra time allocated for female staff on hiring panels (AP1.6;4.3).

The HoD annually reviews female staffs’ SWARM allocation to ensure they are given high-profile/workloaded roles and opportunities, and are not overburdened with administrative or teaching duties (AP6.12).

[Word count = 133]

- (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.

Since 2012/13 nearly 100% of core Departmental meetings and seminars happen within Departmental/University 'core hours' (between 10am and 4pm) (see Table 5). Exceptions are made when an event is followed by a dinner or social event and if we host one-off social gatherings outside core hours we give 6 weeks' notice so that parents and carers can arrange extra support (AP6.11). The teaching day exceeds core hours, but individuals can apply to restrict their hours for family reasons (AP7.5). We realise that some parental/caring responsibilities also fall within these core hours, and we make every effort to accommodate those individuals. MCS also makes every effort to help individuals who suffer a bereavement, with volunteers covering classes and other obligations.

To integrate MCS socially, we host accessible social gatherings and events for example:

1. A Departmental meeting at Reed Hall (on-campus restaurant);
2. Departmental Christmas/Winter Parties;
3. Cross-CEMPS Summer BBQ;
4. A Departmental summer walk.

CS members of staff have:

1. Weekly staff meetings;
2. Coffee Cakes and Catch up;
3. 2 annual 'away days' - research and teaching. These are hosted locally on the University's St Luke's Campus so do not incur overnight stays which can be difficult for parents and carers.

Meeting:	Outside core hours	Inside core hours	Total	% inside
AS M&CS writing group	0	8	8	100%
AS Working Group	0	22	22	100%
College management Group meetings (All HoDs and all Academic Leads, DoRs, DoEs – all disciplines)	0	11	11	100%
College meetings (all college staff):	0	13	13	100%
Maths and CS Discipline meetings – 1 per term (all M&CS staff):	2	10	12	83%
MCS AS Strategy Group	0	16	16	100%
<b>Total meetings</b>	<b>2</b>	<b>80</b>	<b>82</b>	<b>98%</b>

[Word Count = 202]

- (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.

Figure 6, pg.13 is a graphical representation of how our staff feel about MCS. Our AS activities have been essential in positively changing the culture of MCS.

We actively promote women taking on leadership roles, paying particular attention to promoting their participation in Departmental events and as female role models such as:

- **Our 'role model' webpages (6 women, 86 web page views in the last 12 months);**
- **Inspiring Science lectures (25% female mathematicians, above 18% female overall Inspiring Science lecture speakers. As this is a College-level lecture series, we are campaigning to increase this to 50:50 (AP6.9);**
- Student open days (AP2.1).

Senior female member of Maths Department:

- Appointed as Director of International and Development in Jan 2016;
- Appearing in the University's photo montage, and participating in events focused on women such as International Women's Day and the University's 31 and 41 women campaign (in 2014 celebrating the successes of [name removed], [name removed], and [name removed], in the field of Mathematics, and in Mathematics undergraduate Laura Cheney in 2015) (AP6.1).

Our culture is one in that we believe people should always feel that they are treated with dignity and respect. For example:

- Each academic has a Professional Development Account. The College seeds these accounts for new members of staff, and the accounts are replenished from research income, consulting, and some industrial research contracts. Academics are encouraged to pool their account resources, e.g. to create new PhD studentships and administrative support;
- We have successfully sourced £50000 funding for the refurbishment of our kitchens and common rooms to provide a welcoming environment for staff and PGR students, as identified through our focus groups. One of the new kitchens was completed in March 2016; the other will be completed by July 2016 (AP6.14).

The HoD contributes to this culture by:

- Maintaining an open door policy to encourage staff to discuss any issues;
- Sharing best practice and championing change in College and policy or even University policy i.e. College Wide mentoring scheme;
- Hosting regular staff social events inside and outside of core hours (see pg.50);
- Hosting seminar series within core hours so all staff can attend;
- Promoting the confidential Dignity and Respect Advisor Network;
- Promoting 'Care First' telephone and online support resource;
- Signposting individuals to the staff wellbeing resources.

[Word count = 392]

- (i) **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.

Our outreach activities represent the gender equality aims of the Mathematics & CS Disciplines by (1) actively promoting the use of female staff in outreach activities, (2) running activities specifically aimed at addressing gender equality, and (3) working collaboratively on gender equality issues with the Exeter Mathematics School (EMS)..

We have data on 65 outreach activities that MCS has organised over the past three years (28th June 2013 to April 2016). These activities involved 10 (59%) male and 7 (41%) individual female presenters. The female presenters included 5 academics, 1 CEMPS outreach officer, 1 R-only staff member, with support from 2 female PhD students. The males included 9 academics and 1 honorary R-only staff member. As shown in Table 6, the level of participation of women in hours of delivery and preparation times was 43% of the total hours. **We estimate that the activities have reached about 2300 attendees, of which our female presenters entertained 38.4%.** The EMS also has an outreach remit, working with UoE academics to deliver outreach activities to schools in the South-West region. Of the 6 academics that work regularly with the EMS on these activities, four are female (see table 6).. As the EMS is still relatively new no cohorts have yet progressed to University level (AP8.1;8.2;8.3;8.4).

A selection of our ongoing outreach activities are described in section 5 (pg.56-57).

Over the past 3 years, formal recognition in workload hours has been allocated to 5 female and 5 male academics, with women hours counting for 40.9% of the total of allocated hours. Our Mathematics Outreach Officers are [name removed] (male) and [name removed] (female), and CS have a female Outreach Officer [name removed] all of whom sit on the MCSASWG.

**Table 6: MCS Outreach Activities Presenter and Demonstrator Gender 2013-14 to 2015/16**

Academic Year	2013/14	2014/15	2015/16	Totals	Academic Workloads
Number of male staff	6	8	2	10	5
of which non-academics		1		1	n/a
Number of female staff	4	4	5	7	5
of which non-academics (+PhD students)		1 (+1)	2 (+1)	2(+2)	n/a
Number of hours by males	148	131.8	8	279.8	432
Number of hours by females	103	59.3	61	223.3	315.2
Total hours	251	191.1	69	511.1	771.2
Proportion of hours by females (%)	41.0	31.0	88.4	<b>43.7</b>	<b>40.9</b>
Number of attendees	1051	1003	237	2291	
Number of attendees reached by females	290	352	237	879	
Proportion of audience reached by females (%)	27.6	35.1	100.0	<b>38.4</b>	

[Word count =301]

## Flexibility and managing career breaks

- a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.
- (i) **Maternity return rate** – comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

Dataset 19 shows we have a 100% maternity return rate and no changes to FTE. Overall the uptake of maternity leave remains stable but low. One ECR is due to take leave in May 2016. A focus group in 2014 found a belief that staff on short term contracts were not eligible for maternity leave. This is incorrect and as a result the University modified the relevant web pages to be more prominent and clearly state that all staff are eligible, regardless of contract (AP7.1). In Feb 2016 we conducted a survey to look at why maternity leave rates were low and found 2 of our female research staff would not feel confident in taking a period of leave in future (AP7.9). **To address this we have identified several initiatives to increase departmental culture and support for female researchers and academics taking leave (see pg.55).**

[Word Count = 147]

**[Data set 19 – Maternity return rate – removed]**

- (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.

Data set 20 shows there is a good spread of individuals taking paternity leave, with earlier career staff at grades E, F and G represented most. **The uptake of parental leave appears to be increasing since the University reviewed and increased paternity pay in 2013 (AP7.3).**

A recent academic, research and professional services staff survey on maternity, paternity and parental leave (AP7.9) for of those staff who have taken a period of parental leave **100% would feel confident in taking a period of leave in future (Q3) and 80% would feel supported by their colleagues to take leave in future.** This suggests the Bronze actions (AP7.1-7.5) we have in place to support leave are having a positive impact on retaining these staff and we will continue to promote these actions. However, the discipline could offer greater support. Because the majority (81%) of respondents to Q3 of 'No' and 'Not sure' were research active the discipline has identified and put in place new initiatives (AP7.6-7.9) surrounding research, parental leave and returning to work described on pg.55.

**[Data set 20 – parental leave taken - removed]**

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**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.

Staff can request formal (contractual) changes to their working pattern under the relevant parents and carers legislation. Currently no staff have made arrangements under this route. There is a second route where staff can request times/dates during the working week when they would prefer not to be scheduled for teaching to accommodate parent and carer responsibilities. **In 2015-16, there were 12 teaching restriction applications made (1 female): 2 CS, 9 Maths and 1 Maths and CS: 6 for ‘family friendly’ reasons, spanning all grades.** A formal core hours policy for all meetings (10:00-16:00) and working practice policy was implemented CEMPs-wide in January 2015. 100% of core Departmental meetings, and 80-90% of MCS colloquia and events have taken place in core hours since then.

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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.**

1. **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 majority of research-only roles (e.g. PGR and Postdoctoral researcher positions) can be undertaken flexibly due to the nature of the work and this is supported within the discipline. Researchers who wish to work flexibly are encouraged to discuss this with their supervisor first, followed by our HRBP for further clarification. If issues arise with this arrangement, supervisors are encouraged to first discuss this with the researcher before contacting the HRBP.

In the 2014 Employee Engagement Survey, **84% of CEMPs staff agreed that they have the opportunity to work flexibly in their role (e.g. flexi-time, homeworking, family friendly hours).** We promote flexible working and part time working to staff and potential applicants on our ‘Working Here’ web page, the College Intranet and during induction (AP3.1;3.2;7.1). The University developed a ‘flexible working Toolkit’ for staff and managers with extensive information and guidance on the implementation and support of flexible working for staff.

[Word Count = 151]

2. **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.

MCS has a record of low uptake of maternity leave. Based on feedback from our survey and discussions with our one future maternity leave taker, four new initiatives have been developed to ensure that leave-takers are even better supported before, during and returning from leave by MCS via AP7.6:

- **Periodic Research Digest;**

- **Parental Leave Grant Monitoring;**
- **Maximising the Utility of Keeping in Touch (KIT) or Shared Parental in Touch (SPLIT) Days;**
- **Parental Study Leave on Return (AP7.7).**

Together these initiatives are designed to ensure that the transition from work to parental leave back to work again is as smooth as possible and that new parents are not disadvantaged when taking parental leave. These initiatives will be advertised prominently on the Discipline website to encourage new parents, and women in particular to feel supported by MCS.

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[Section 4 Total Word Count: 5390]

**5. Any other comments: maximum 500 words:** *Please comment here on any other elements which are relevant to the application, e.g. other STEMM-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.*

Both for Maths, and particularly for CS, our analysis has identified that the 'gap/leak' in our pipeline begins far before University. That is why we have, and will continue to, focus a large amount of our AS efforts on outreach activities at schools and events. Examples of outreach activities led by female members of staff are below. These each involved one female academic, were coordinated by the CEMPS Outreach Officers and were dedicated to working with female students from widening participation schools across Devon and Cornwall (AP8.1):

- "Getting close to a Comet and closer to the Sun", Exeter Maths School Year 10 Summer Residential Workshop, August 2015.
- "Space in Your Hands" initiative, including the organisation of a Consortium meeting to reach out to the blind community, May 2015.
- 'Managing your academic career (STEMM)' session Co-facilitator, sharing career advice and experiences to Exeter ECRs for the Researcher Development programme, February 2015.
- "Flowing from the Sun: Modern Views of Heliospheric Research" Public lecture in Monash, Melbourne, Australia <http://moca.monash.edu/outreach/foullon.html>, July 2014
- "Seeing solar storms in STEREO", Monthly Maths Challenge for Exeter Maths School, April 2014.
- Maths workshop for year 10 students, St Peter's School, Exeter, March 2014
- Maths workshop for years 9 and 10 students, King Arthur's Community School, Wincanton Somerset, May 2015
- Two maths workshops at the Exeter Mathematics School summer residential programme for Year 10 students, University of Exeter, Aug 2015
- Maths Student Community event for able mathematicians from across the South-West, Exeter Maths School, Nov 2015
- EMS Online Maths Challenge (<http://www.exetermathematicsschool.ac.uk/competitions/>) Feb 2015, March 2014)
- Female mentoring at the Woods Hole Summer School in 2014

Our ongoing outreach activities include:

- Supervising extended projects for A-level students from the EMS, giving their students access to our senior female role models.

- Our school mentoring program: 50% of the mentors are female undergraduate students, and **we have received positive feedback from EMS on the impact of this on their students** (AP8.2);
- Organising Women in STEMM events - our first two attracted 90 female students from across the South-West region;
- Designing a new programme with EMS outreach to ages 16+ in the Southwest (AP8.5).

Since 2013/14 we have engaged in a large-scale outreach activity, the CEMPS Christmas Lectures. This attracted over 200 pre-university students in 2013/14, and over 400 students in 2014/15. At each event, we had two male and two female speakers. We encourage our female undergraduate and postgraduate students to be actively involved in our outreach activities, to increase the visibility of 'achievable' role models to pre-university female students.

In June 2016 CS Professor Krasimira Tsaneva-Atanasova: will be presenting at Exeter's second Soapbox Science event. She has also acted as a mentor for other Soapbox Science participants based on her experience at other institutions Soapbox Science events. This will be the first year that MCS is represented at this Outreach event. Last year Exeter's Soapbox Science engaged over 2400 people. This year the participants will be individually profiled on the University's 'Researcher Gateway' webpages. The event will be followed by Twitter Q&A sessions with the speakers, and 'periscope' films made of the talks and uploaded to UoE's 'Women in Higher Education' YouTube channel to increase the visibility of our female role models.

[Section 5 Total Word count = 529]

## **Section 6: Mathematics and CS Department – Athena SWAN Action Plan 2016 – 2019**

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## **Section 7: Mathematics and CS Department – Athena SWAN Case Studies**

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