



Athena SWAN Bronze department award application

Name of university: University of Birmingham

Department: School of Mathematics

Date of application: April 2013

Date of university Bronze and/or Silver SWAN award: November 2011

Contact for application: Dr Sharon Stephen

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Departmental website address:

<http://www.birmingham.ac.uk/schools/mathematics/index.aspx>

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

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

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

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

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

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



**UNIVERSITY OF
BIRMINGHAM**

School of Mathematics

Dr Paul Flavell
Head of School

Email: P.J.Flavell@bham.ac.uk

Telephone: 44 (0) 121-414-3740

30th April 2013

Letter of endorsement from Head of School

The School of Mathematics at the University of Birmingham started seriously considering equality and diversity issues just over a year ago. Since then there has been much discussion (informal and formal) to identify the key issues for the School and propose new initiatives. As a result the staff body are aware of the issues and many staff are actively engaged in making improvements.

The changes already taken place, and those proposed in the Action Plan have support from the senior management of the School. I chair the newly established School Equality and Diversity Committee and the Athena SWAN Working Group. The importance placed on these activities is demonstrated by one of the Deputy Heads of School being responsible for Equality and Diversity.

Simple changes already made, such as the introduction of a weekly coffee break and other social activities, have brought more staff together, creating a better working atmosphere. Further initiatives in the Action Plan should help staff achieve a healthy work-life balance, which is a priority for the School.

The introduction of the “Women Leading in Mathematics and Science” lecture series for undergraduate students has brought some inspiring lectures to the School as well as useful networking opportunities.

The School has seen a pleasing increase in the number of female lecturers, with 8 new female appointments in the last 6 years. Thus, it has been possible to have better gender balance on committees, although we recognise that more needs to be done.

The emphasis on supporting staff through promotion will benefit all members of staff. The School aims to provide a structure where all staff contribute to provide an excellent teaching experience for students and they can establish and maintain fulfilling research careers. We recognise the additional support required for staff returning from maternity (or adoption) leave and are committed to providing this.

The Action Plan will bring more female visitors to the School to facilitate networking opportunities with other female academics. In addition, we recognise the support from the College of Engineering and Physical Sciences in establishing a “Women in EPS” group.

Completing the London Mathematical Society’s Good Practice Checklist last summer revealed many examples of good practice. The subsequent report and the feedback provided to the School have helped to inform our action plan. In particular, we will introduce reporting of female:male data as routine across the School. This way we will be able to take immediate action if necessary.

Structures are in place in the School so that most actions stated in the Action Plan of this application can be started as soon as possible. Then staff and students can benefit from the improvements made. The Action Plan should lead to a School where all staff feel valued and who work together to improve the learning experience for students and to increase the research reputation of the School. I fully support this application for an Athena SWAN Bronze department award.

Yours faithfully,

A handwritten signature in cursive script that reads "Paul Flavell".

Dr. P.J. Flavell
Reader in Algebra

Word count: 499 (max 500)

Section 2 - The self-assessment process: maximum 1000 words

Describe the self-assessment process. This should include:

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

The self assessment team (Athena SWAN Working Group) is a subgroup of the School Equality and Diversity Committee. It has 5 members (2 females and 1 male from the School and 2 females from HR). The team was chosen to include senior management in the School and a junior member who has recent experience of returning from maternity leave. As the School has a relatively small number of staff, and only 8 female staff, the Working Group has 5 members.

Dr. Paul Flavell is a Reader in Algebra and Head of School. He joined the University in 1990. He co-chairs the School Equality and Diversity Committee.

Dr. Sharon Stephen is a Senior Lecturer in Applied Mathematics and Deputy Head of School (Equality and Diversity). She joined the University in 1991. She has two children, aged 18 and 22. She has been proactive in seeking out areas of good practice and promoting them in the School, College and University. She co-chairs the School Equality and Diversity Committee and is a member of the College of Engineering and Physical Sciences (EPS) Equality and Diversity Committee and the University Athena SWAN Working Group.

Dr. Susana Gutierrez is a Lecturer in Analysis. She joined the university in 2007. She has two young children, aged 6 and 4 and works full-time. She took maternity leave followed by paid holiday and study leave of a term after the birth of her youngest son. She is currently a member of the Admissions Team.

Susan Squire is the University's staff Diversity Advisor and works full-time in the HR department. She is providing advice and guidance to Schools participating in Athena SWAN and has supported the production of data and examples of best practice for this submission.

Kelly Hayes has been an HR Adviser at the University since 2009. She is responsible for providing HR advice to the College of EPS. She has knowledge of employment law and its implications in the workplace and of the HR policies and procedures at the University. She has no caring responsibilities.

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

The self assessment team have met 5 times to discuss the application. Susan Squire provided advice and data for the application. The data obtained was analysed as it became available.

Successful submissions from other universities were considered for examples of good practice. Consequently, possible new initiatives for the School were discussed and some implemented during the course of preparing this submission. Our progress was reported regularly to the School Management Committee and the School Committee.

The College of EP S (of which Mathematics is part) had a launch of its Athena SWAN activities, including a Women in EPS group, in November 2012. This was attended by Drs. Gutierrez and Stephen (as well as other members of the School). The invited speaker was Professor Robin Peruz, former Head of School of Chemistry at the University of York. His School has a gold Athena SWAN award. His presentation of their activities was extremely useful since many of them were simple steps which supported all staff. Dr. Stephen gave an update of the activities in the School of Mathematics. This event facilitated contact with the Athena SWAN leads in other Schools, resulting in several meetings to share experiences.

The College also held a series of focus groups with female academic and research staff in December 2012, to ascertain their views on how female staffs' aspirations could be better supported. Female staff from Mathematics attended these groups and the report findings have informed the application and action plan. As the School only employs 8 female academic staff, we have made use of College-wide opportunities for consultation with staff.

Dr. Stephen was funded by Universitas 21 to conduct a project on Equality and Diversity in Higher Education at the University of New South Wales, Australia in August 2012 in order to discover good practice. She spoke to many academics at UNSW and produced a report on her findings. She has promoted her recommendations at School, College and University level committees. The result is that many new initiatives have arisen at School and College level. In the School these include a weekly coffee break, more social events and a lunch attended by all female academics and female researchers. In the College of EPS promotion workshops have been arranged and a Women in EPS group established.

In July 2012 Dr. Stephen completed a Good Practice Checklist for Mathematics on the School procedures (relating to Athena SWAN) for the London Mathematical Society (LMS). This was valuable in identifying areas of good practice which needed to be adopted. The outcome of the national survey was launched in February 2013 at a reception at Westminster, attended by Dr. Stephen. The resulting report "Advancing Women in Mathematics: Good Practice in UK University Departments" gives many examples of good practice. The School recently received benchmarking feedback from the LMS on our checklist in the "Report of Good Practice in the School of Mathematics, University of Birmingham". This highlighted our lack of reporting and evidence of procedures. The report and feedback have been discussed by the self assessment team and have been influential in forming our action plan.

Drs. Gutierrez and Stephen attended the LMS workshop in London in November 2012 to support Athena SWAN applications. Examples of good practice were presented from three Universities. It was useful to talk to other people involved in the preparation of Athena SWAN applications.

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

The self assessment team will continue to meet twice a year to discuss the progress of implementing the action plan. The team will report to the Equality and Diversity Committee, who will report to the School Committee. The School Committee meets at least twice a year and is attended by all members of academic staff and representatives of the undergraduate and postgraduate students and support staff. Monitoring of the updated data presented in this application will be done by the appropriate committees and reported to the Equality and Diversity Committee once a year. The specific details are given in the Action Plan.

Word count: 999 (max 1000)

Section 3 - A picture of the department: maximum 2000 words

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

The School of Mathematics at the University of Birmingham is in the College of Engineering and Physical Sciences (one of 5 Colleges in the University). The School currently has 43.3 academic staff (11 Professors; 4.3 Readers; 4 Senior Lecturers; 24 Lecturers), 6 Research Fellows, 1 academically related member of staff who leads on student outreach, and 7 support staff (of which 5 are full-time and 2 are part-time). The average age of the academic staff is 40.

The School has undergone an exciting period, with 10 new excellent Lecturer appointments in the past 3 years, growing the rapidly developing research strengths in analysis, combinatorics and mathematical biology, as well as the various established areas of research excellence. There has been the development of several new MSc programmes, new direct entry schemes with partner universities in China, an expansion of academic tutoring, a revitalisation of careers and employability activities, and an expansion in the size of the undergraduate cohort to about 220 new students a year.

The Head of School is Dr. Paul Flavell. There are 3 Deputy Heads of School, for Education, Research and Equality and Diversity. There are 3 research groups with their own Heads and a Director of Marketing and Recruitment and a Director of the Graduate School. This group of people form the membership of the School's Management Committee that meets bi-weekly, together with the College Operations Lead for Mathematics and Physics.

The School formed an Equality and Diversity Committee (EDC) in February 2012, which is examining issues associated with equality and diversity, as well as wider work-life balance and well-being issues. Sharon Stephen leads this agenda in the School with the full support of the Head of School.

The School became a supporter of the LMS Good Practice Scheme in the summer of 2012. As such we are working towards the Five Principles of Good Practice:

Principle 1: A robust organisational framework to deliver equality of opportunity and reward.

Principle 2: Appointment, promotion and selection processes and procedures that encourage men and women to apply for academic posts at all levels.

Principle 3: Departmental structures and systems that enable men and women to progress and continue in their careers.

Principle 4: Departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff.

Principle 5: Flexible approaches and provisions that encompass the working day, the working year and a working life and enable individuals, at all career and life stages, to maximise their contribution to mathematics, their department and institution.

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

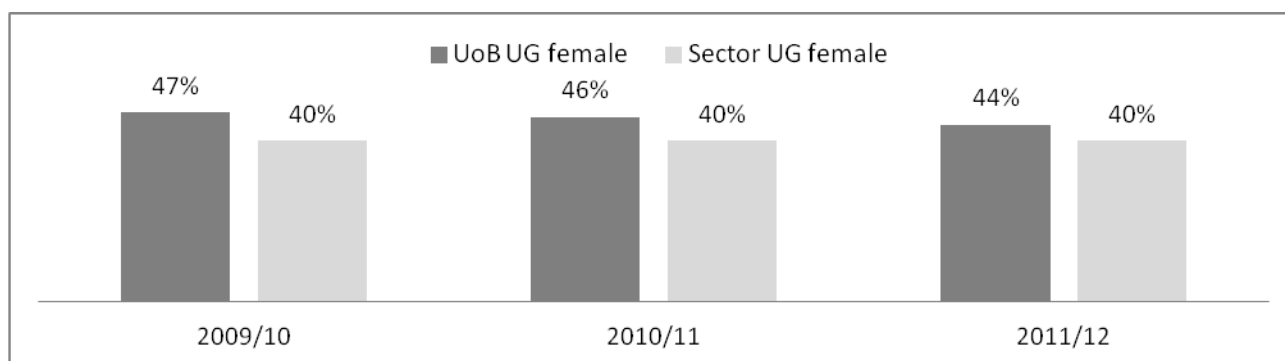
Student data

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

We do not offer foundation degrees.

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

Figure 1 – UoB and sector Mathematics female undergraduate populations (%)



Year	School of Mathematics				National average (HESA)	
	Female		Male		Total	
2009/10	244	47%	273	53%	517	40% 60%
2010/11	258	46%	301	54%	559	40% 60%
2011/12	268	44%	335	56%	603	40% 60%

Undergraduate enrolment (year 1 only)

School of Mathematics					
Year	Female		Male		Total
2009/10	78	41%	112	59%	190
2010/11	107	49%	111	51%	218
2011/12	79	40%	119	60%	198

The proportion of female undergraduate students is above the sector average. However, it has declined slightly over the last two years. Further analysis reveals that there is a reduced proportion of female students continuing to year 4 (MSci).

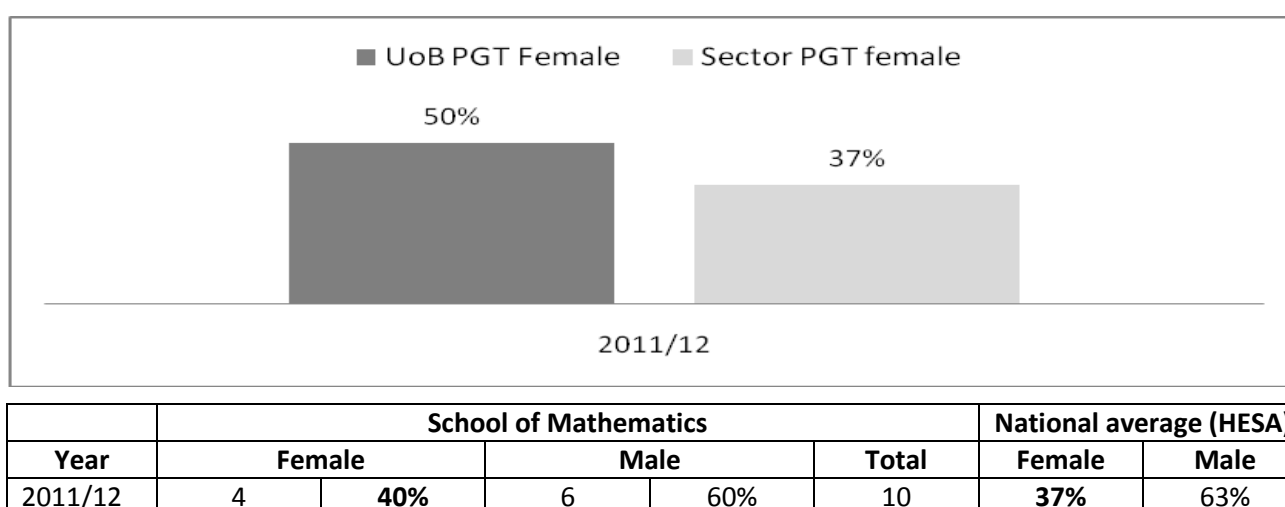
We aim to increase the proportion of female students in year 4.

Actions:

- continue with the “Women Leading in Science and Mathematics” lecture series for undergraduate students
- showcase PhD projects to undergraduate students
- set up a working group to suggest further initiatives

- (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.

Figure 2 - UoB and sector Mathematics female postgraduate taught populations (%)



The School introduced 3 new MSc taught programmes in 2011/12. The numbers on the programmes are low but female:male ratios are around the national average.

Currently these programmes have 26 students with similar ratios (9 female and 17 male). Two of the three staff responsible for admissions onto these programmes are female.

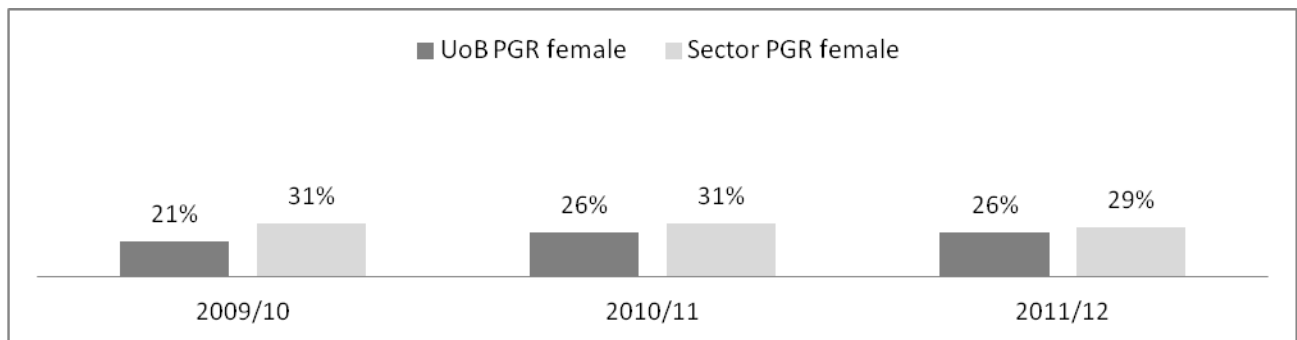
We aim to monitor these numbers.

Action:

- the Graduate School to report female:male PGT student ratio annually to EDC

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

Figure 3 - UoB and sector Mathematics female postgraduate research populations (%)



Year	School of Mathematics				National average (HESA)	
	Female		Male		Total	
2009/10	10	21%	38	79%	48	31%
2010/11	10	26%	29	74%	39	31%
2011/12	10	26%	29	74%	39	29%

The School is concerned about the low levels of female research students (below the national average), with no new female students starting in 2012.

Analysis of this data showed that action was necessary and possibilities were discussed in the self assessment team and with other School staff. It was decided to run a “Women Leading in Science and Mathematics” lecture series for undergraduate students. Funding for this activity was obtained from the College of EPS.

A second initiative with the same aim was lead by a female PhD student in Applied Mathematics. She arranged presentations by other PhD students on their research projects to undergraduate students.

Female students were particularly encouraged to attend these events. Unfortunately, they were not well attended, maybe due to being on a Wednesday afternoon (chosen since no teaching is timetabled then).

The aim is to encourage female year 3 students to continue for year 4 and to encourage female year 4 students to apply for PhD study.

Actions:

- continue the “Women Leading in Science and Mathematics” lecture series but review timing to have better participation and monitor impact
- showcase PhD projects to undergraduate students
- set up a working group to consider further initiatives

- (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.

Please note that the 'offers made' and 'offers accepted' rates are both presented as a % of applications received, i.e. in the second graph below, 89% of all female applicants got offers and 44% of all female applicants accepted those offers. Please also note that 2013 data covers applications up to now.

Undergraduate degrees

Figure 4a - Undergraduate applications by gender and year of entry (%)

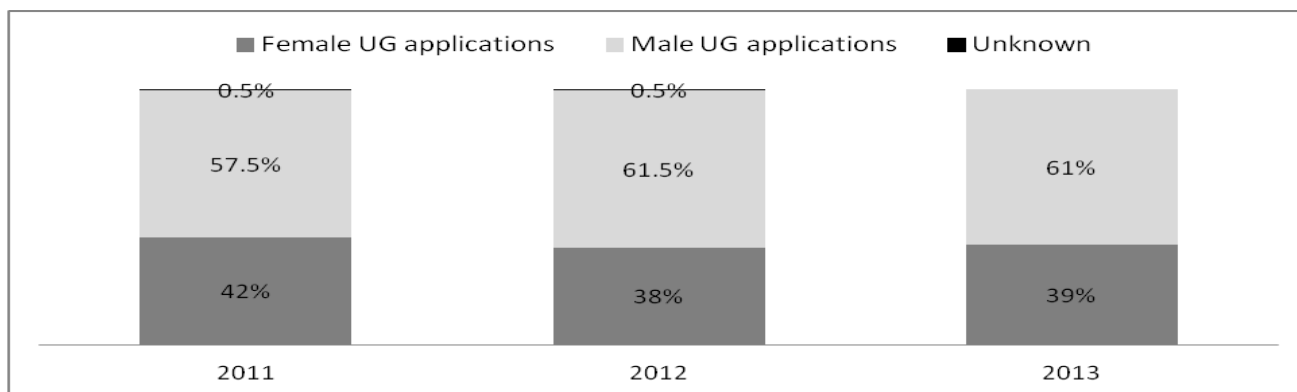
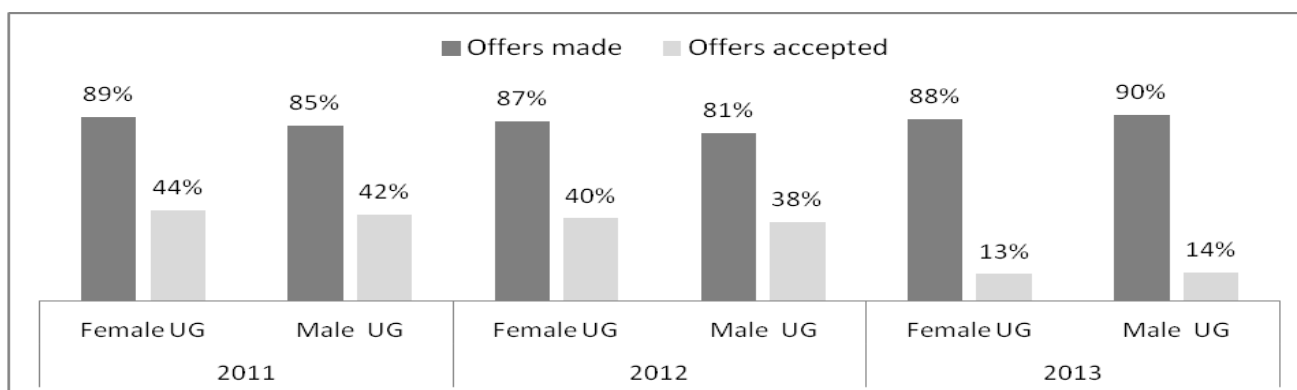


Figure 4b - Undergraduate offer and acceptance rates by gender and year of entry (%)



UG Applications, offers and acceptances (no.)									
	Applications			Offers Made			Offers accepted		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Female	535	444	397	476	388	349	234	178	52
Male	733	722	630	625	582	569	311	275	86
Unknown	8	6	0	0	0	0	0	0	0
Total	1276	1172	1027	1101	970	918	545	453	138

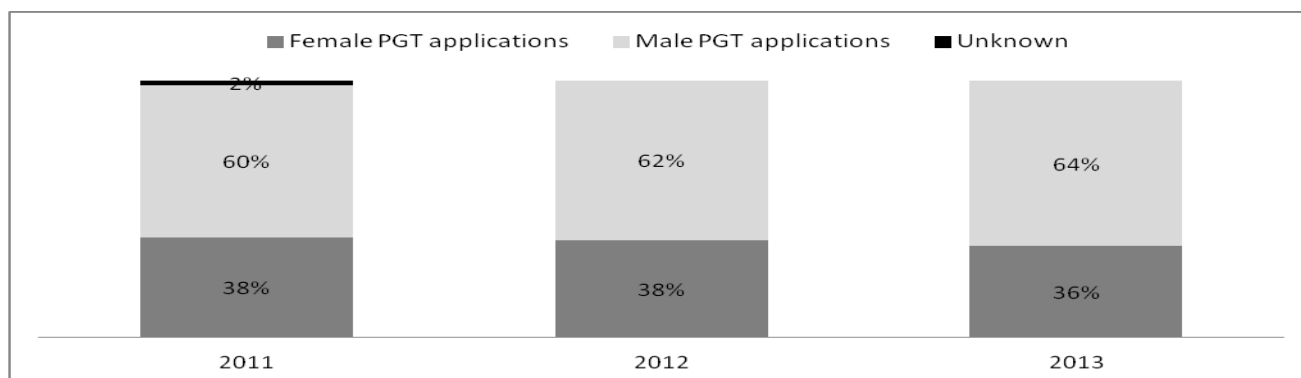
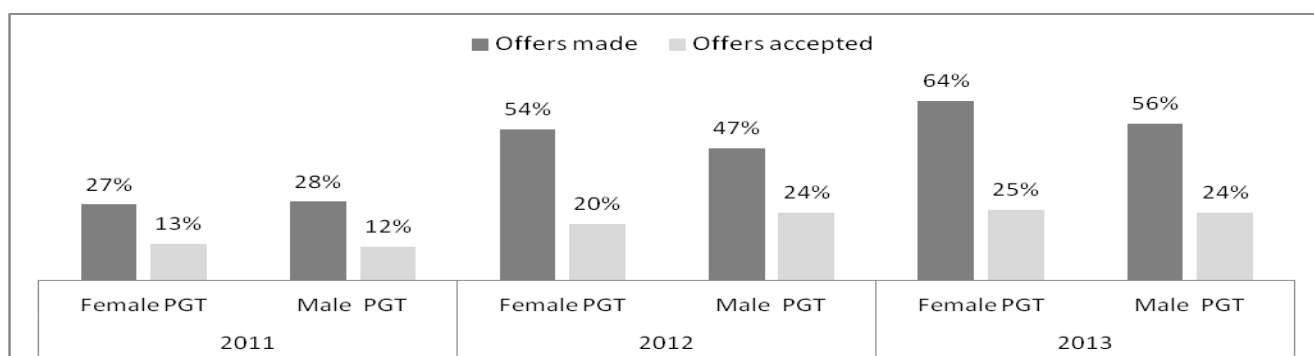
The proportion of female applications (about 40%) is slightly lower than the actual proportion who come to study.

There is not much difference between the proportion of offers made or accepted by gender. These have been slightly higher for female applicants in the last two complete application rounds.

An objective is to increase the proportion of female undergraduate applicants.

Actions:

- continue to have female students and staff visible on Open Days and Applicant Visit Days
- Admissions Team to monitor data on applications, offers and acceptances by gender and report annually to EDC

Postgraduate taught degrees**Figure 5a - Postgraduate taught applications by gender and year of entry (%)****Figure 5b - Postgraduate taught offer and acceptance rates by gender and year of entry (%)**

PGT Applications, offers and acceptances (no.)									
	Applications			Offers Made			Offers accepted		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Female	48	122	67	13	66	43	6	24	17
Male	74	199	121	21	93	68	9	48	29
Unknown	2	0	0	0	0	0	0	0	0
Total	124	321	188	34	159	111	15	72	46

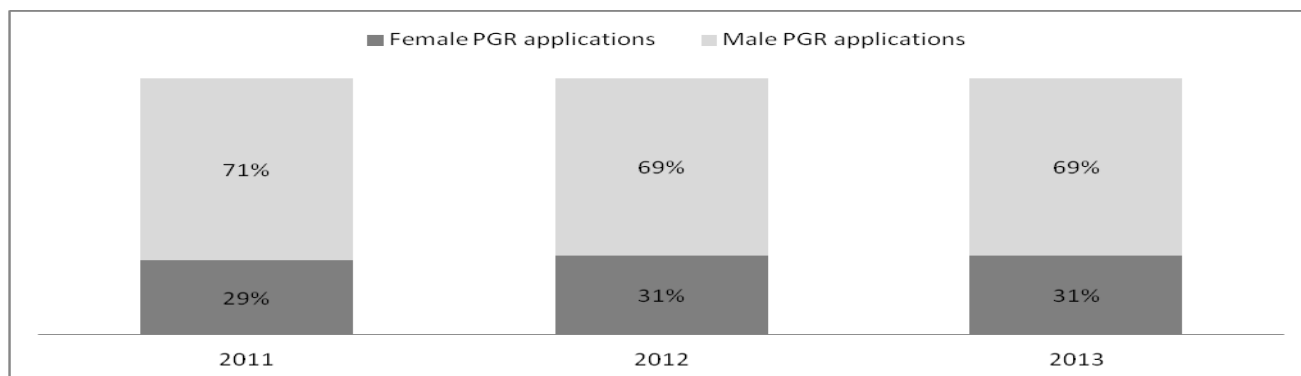
The PGT programmes have only been running for two years and so the numbers are fairly low. The female students comprise about 40%.

A higher proportion of offers were made to female applicants but in 2012 a lower proportion of those accepted the offer.

An objective is to increase the proportion of female PGT applicants and acceptances.

Action:

- Graduate School to consider appropriate action to increase the numbers of female PGT students

Postgraduate research degrees**Figure 6a - Postgraduate research applications by gender and year of entry (%)****Figure 6b - Postgraduate research offer and acceptance rates by gender and year of entry (%)**

PGR Applications, offers and acceptances (no.)									
	Applications			Offers Made			Offers accepted		
	2011	2012	2013	2011	2012	2013	2011	2012	2013
Female	62	41	26	16	19	9	8	3	6
Male	154	91	58	48	38	19	25	22	4
Total	216	132	84	64	57	28	33	25	10

The proportion of female applicants for PGR programmes has remained low (around 30%). The total number of applicants has declined sharply.

In 2012 there was a large drop in female acceptances and in fact no new female students started in 2012. However, the School has recently made 3 PhD scholarship offers to female applicants (out of a total of 5) for 2013 entry.

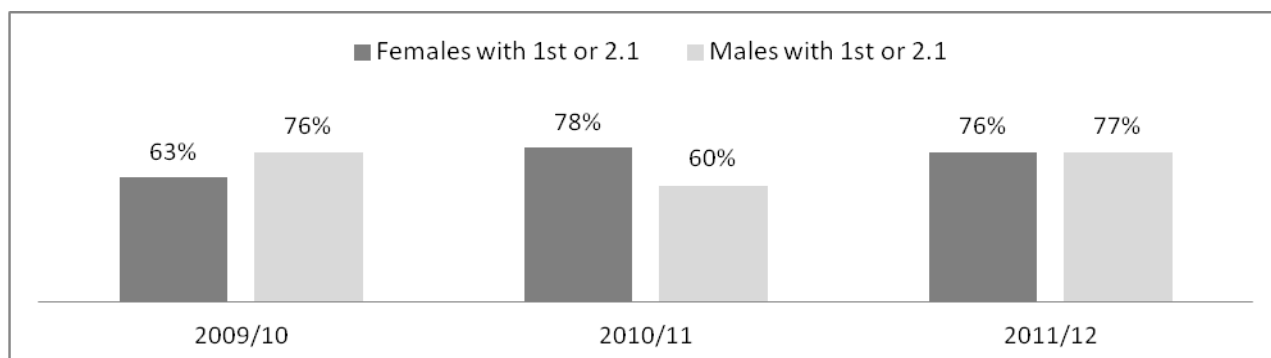
The objective is to increase the number of female PGR applications and acceptances.

Actions:

- continue undergraduate lecture series but review to achieve better participation
- showcase PhD projects to undergraduate students
- Graduate School to consider a policy on gender balance for interviews of PhD applicants

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

Figure 7 - Mathematics undergraduates receiving a first or upper second degree (%)



Undergraduate degree classification by gender					
2009/10		Female		Male	
	1 st	20	33%	15	25%
	2.1	18	30%	31	51%
	2.2	13	21%	10	17%
	3 rd	10	16%	4	6%
	Pass	0	0%	1	1%
	Total	61	100%	61	100%

2010/11	1 st	32	33%	20	30%
	2.1	43	45%	20	30%
	2.2	18	19%	21	30%
	3 rd	3	3%	7	10%
	Pass	0	0%	0	0%
	Total	96	100%	68	100%

2011/12	1 st	27	41%	36	41%
	2.1	23	35%	32	36%
	2.2	14	21%	15	17%
	3 rd	2	3%	5	6%
	Pass	0	0%	0	0%
	Total	66	100%	88	100%

In 2009/10 and 2010/11 more female students obtained first class honours degrees. In 2011/12 the proportions for each degree class was very similar.

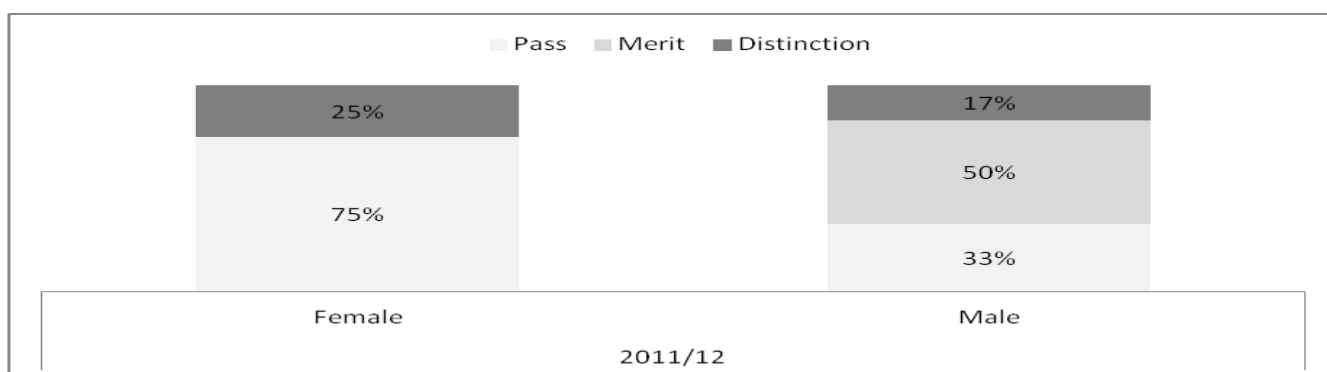
Earlier analysis revealed a drop in performance of female students in 2009/10. Subsequently, two focus groups were held (one with female students and one with male students) to look at the student experience and to ascertain if any changes needed to be made. The results were discussed at the School Teaching and Learning Committee in January 2012 with the outcome that no changes were needed. It is noted that in 2010/11 female students out-performed male students in every programme. This was more balanced in 2011/12.

The objective is to ensure no gender bias in overall performance.

Action:

- the School Teaching Quality Committee to continue monitoring student performance annually to determine if further action necessary

Figure 8 – Mathematics Postgraduate taught degree outcomes



Postgraduate taught degree classification by gender					
2011/12		Female		Male	
	Distinction	1	25%	1	17%
	Merit	0	0%	3	50%
	Pass	3	75%	2	33%
	Total	4	100%	6	100%

This data is for the first year of running these programmes and the number of students is low. A higher proportion of female students obtained a pass degree.

There were several unexpected failures in the examinations which were surmised to be due to the students being unfamiliar with our examination system. The students were given special resit arrangements. This issue was addressed this session by the initiative to hold individual revision classes for all PGT students with lecturers to discuss past examination papers.

The objective is to ensure no gender bias in overall performance.

Actions:

- Graduate School to monitor performance of PGT students annually and report to EDC
- review the provision of special revision classes

Staff data

Note - The staff population data is taken from a snapshot of the staff body in September of that year. Where data is used in relation to an employment process (such as recruitment and promotions), it is based on a full academic year.

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

Figure 9a – UoB Mathematics academic and research staff (%)

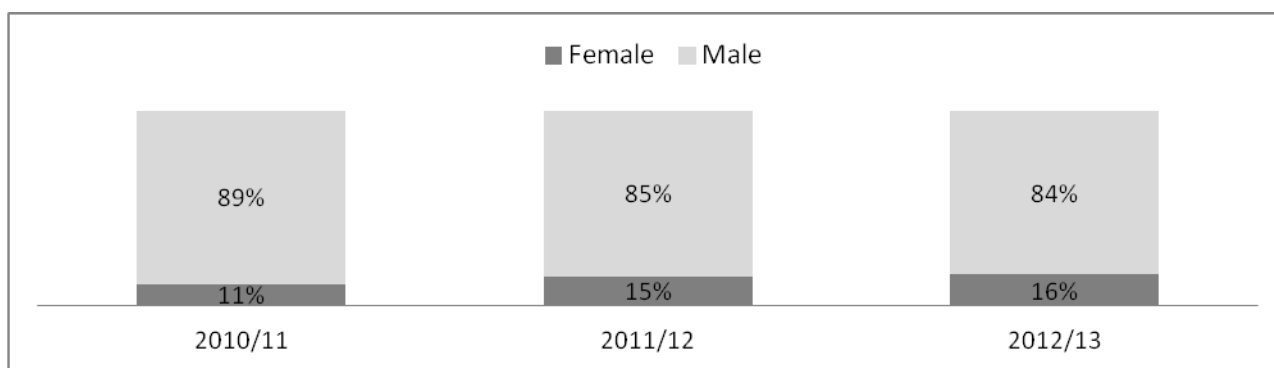
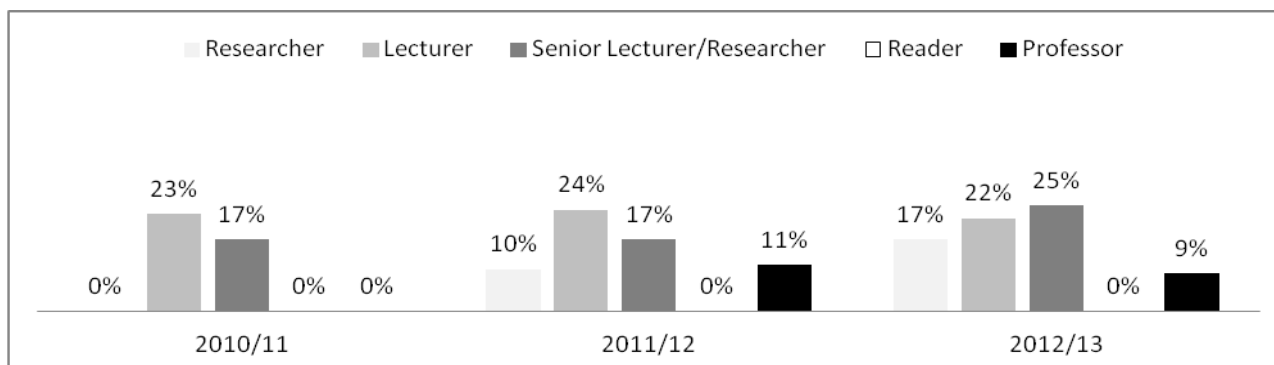


Figure 9b – Comparison to sector averages for Mathematics (%)



Figure 9c – Proportion of female Mathematics staff per grade (%)



Mathematics staff by gender and grade									
	2010/11			2011/12			2012/13		
	Female	Male	% Female	Female	Male	% Female	Female	Male	% Female
Researcher	0	9	0%	1	9	10%	1	5	17%
Lecturer	5	17	23%	5	16	24%	5	18	22%
Senior Lec/Researcher	1	5	17%	1	5	17%	1	3	25%
Reader	0	7	0%	0	8	0%	0	5	0%
Professor	0	9	0%	1	8	11%	1	10	9%
TOTAL	6	47	11%	8	46	15%	8	41	16%

Whilst the School employs a comparatively small number of female staff, the proportion of female academic staff and researchers has grown in recent years. However, the current level is below the sector average and we recognise the need to increase the number of female staff employed on all grades, through improved recruitment and supporting current staff in their aspirations to progress to more senior roles. Actions relating to promotion are described later in section 4b(ii).

An objective is to increase the proportion of female staff and researchers.

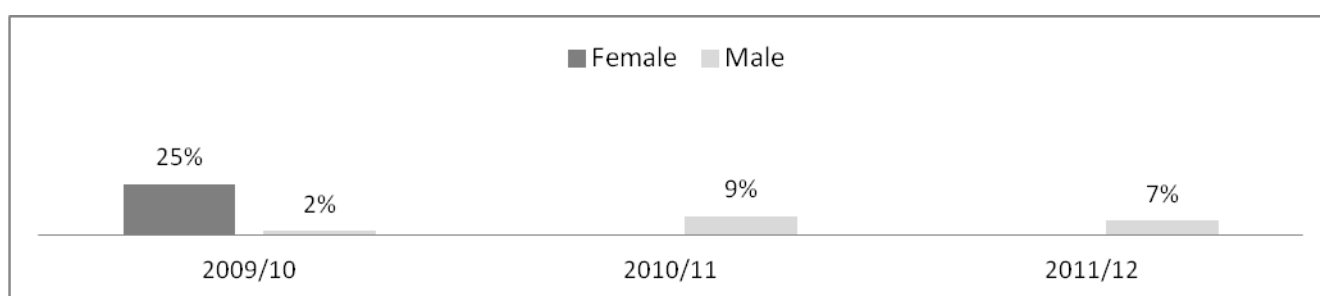
Actions:

- encourage female applications by demonstrating family-friendly School
- ensure a gender balance in all appointment processes (shortlisting and interviewing)

(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.

Figure 10 – Resignations by gender (%)

Note - Turnover is presented as a % of the female and male populations in that year:



Female staff resignations											
Year	Researcher		Lecturer		Senior Lecturer		Reader		Professor		Total
2009/10	2	67%	-	-	-	-	-	-	-	-	2 25%
2010/11	-	-	-	-	-	-	-	-	-	-	0 0%
2011/12	-	-	-	-	-	-	-	-	-	-	0 0%

Male staff resignations												
Year	Researcher		Lecturer		Senior Lecturer		Reader		Professor		Total	
2009/10	-	-	1	7%	-	-	-	-	-	-	1	2%
2010/11	2	22%	1	6%	-	-	-	-	1	11%	4	9%
2011/12	2	22%	1	6%	-	-	-	-	-	-	3	7%

The researchers were all on fixed-term contracts. There have been no resignations of female academics in this period and only 4 male staff have resigned. These male staff all left for positions overseas in their respective countries of origin. We do not feel that turnover of female staff is an issue of concern, but that both increasing the number of female academics and improving female progression to higher grades are.

Word count: 1512 (maximum 2000)

Section 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.

Figure 11a - Job applications and appointments by year (%)

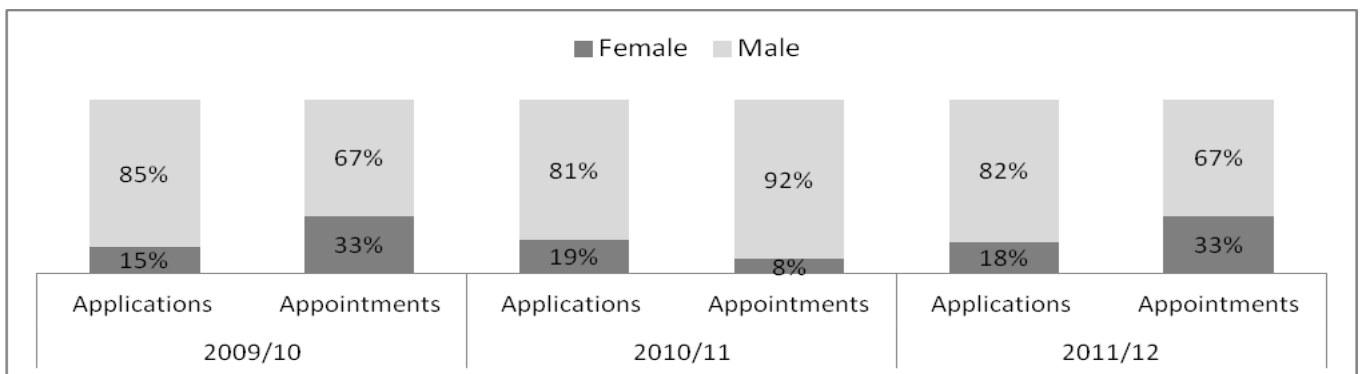
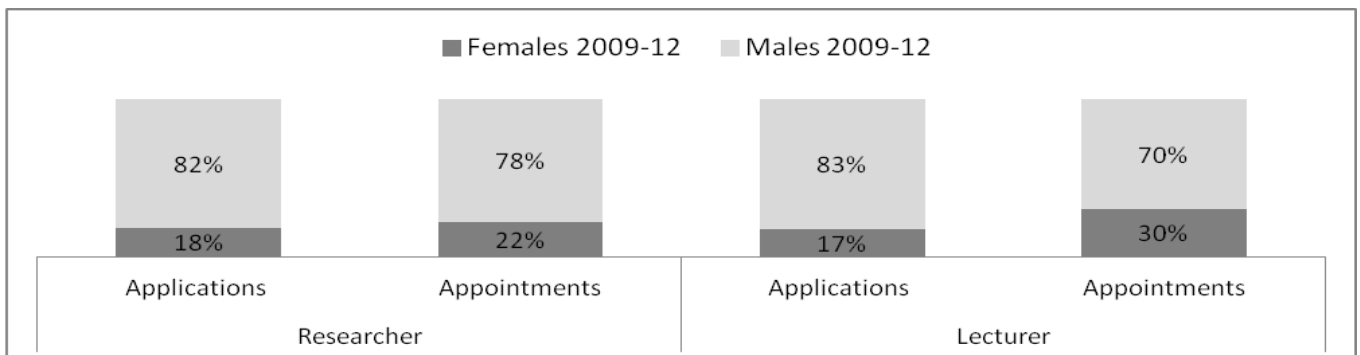


Figure 11b - Total 2009-2012 applications and appointments by grade (%)



Job applications and appointments						
2009/10	Applicants			Appointments		
	Female	Male	% Female	Female	Male	% Female
Researcher	7	34	17%	2	5	29%
Lecturer	23	133	15%	1	1	50%
Total	30	167	15%	3	6	33%

2010/11	Applicants			Appointments		
	Female	Male	% Female	Female	Male	% Female
Researcher	13	54	19%	1	9	10%
Lecturer	6	25	19%	0	2	0%
Total	19	79	19%	1	11	8%

2011/12	Applicants			Appointments		
	Female	Male	% Female	Female	Male	% Female
Researcher	18	83	18%	2	4	33%
Lecturer	27	118	19%	2	4	33%
Total	45	201	18%	4	8	33%

The proportion of female applicants has risen slightly from 15% to 18% in 2009-2012. In this period 5 female and 18 male researchers were appointed and 3 female and 7 male lecturers were appointed. Female applicants have a good application to success ratio, but we recognise that more needs to be done to encourage greater numbers of applicants if we are to raise our population to the sector average. The School is planning a number of activities to encourage more female applicants and improve its recruitment practices. These are addressed under section b(i) below.

- (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.

Figure 12a - Promotions applications and appointments by year (%)

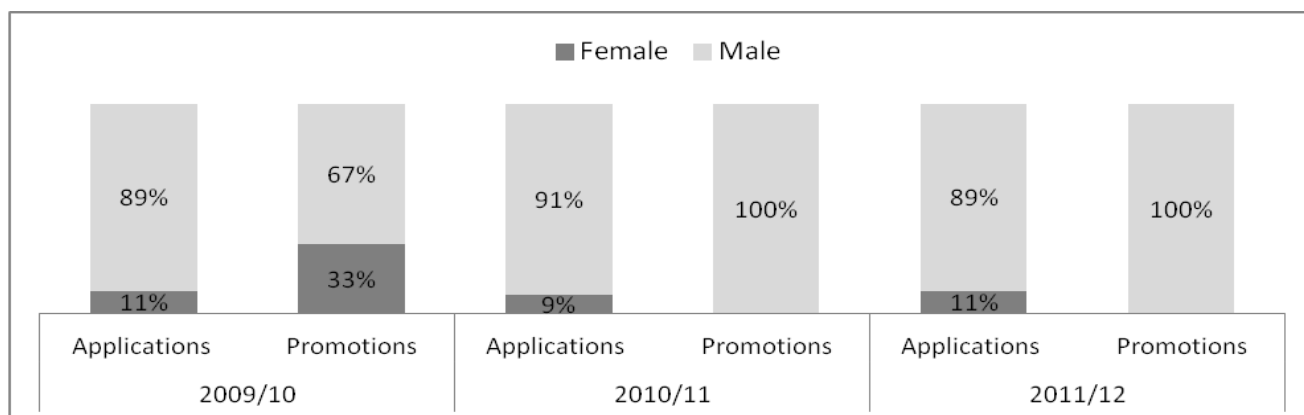
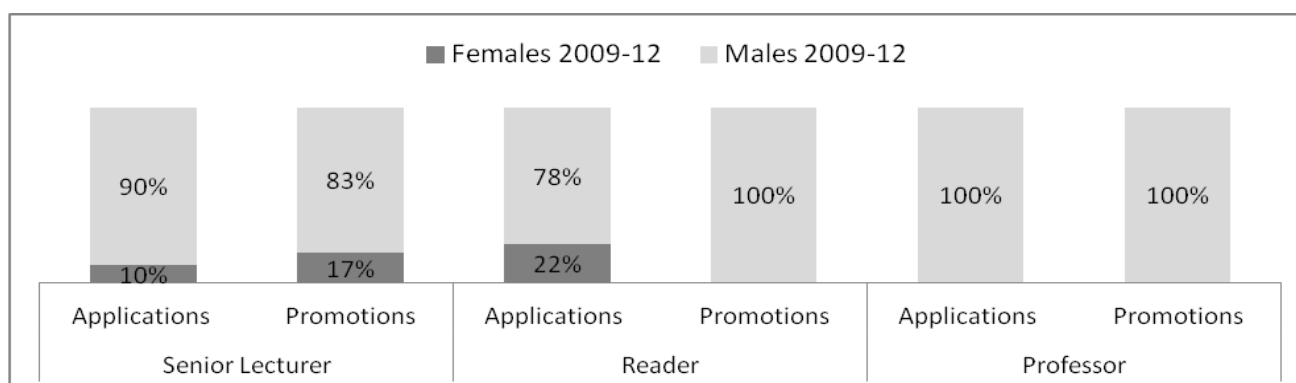


Figure 12b - All promotions applications and appointments by grade (%)



Applications and promotions by gender and grade						
2009/10	Applicants			Promotions		
	Female	Male	% Female	Female	Male	% Female
Senior Researcher	-	-	-	-	-	-
Senior Lecturer	1	3	25%	1	2	33%
Reader	0	3	0%	0	0	0%
Professor/Chair	0	2	0%	0	0	0%
Total	1	8	11%	1	2	33%

2010/11	Applicants			Promotions		
	Female	Male	% Female	Female	Male	% Female
Senior Researcher	-	-	-	-	-	-
Senior Lecturer	0	3	0%	0	1	0%
Reader	1	3	25%	0	1	0%
Professor/Chair	0	4	0%	0	0	0%
Total	1	10	9%	0	2	0%

2011/12	Applicants			Promotions		
	Female	Male	% Female	Female	Male	% Female
Senior Researcher	-	-	-	-	-	-
Senior Lecturer	0	3	0%	0	2	0%
Reader	1	1	50%	0	1	0%
Professor/Chair	0	4	0%	0	3	0%
Total	1	8	11%	0	6	0%

The number of staff promoted in 2009-2011 is low (1 female, 4 male) and the number of female staff applying for promotion is particularly low. During 2011/12 a greater number of staff were promoted (all male), but only 1 female staff applied for promotion that year. In total, 3 female staff applied for promotion during this 3 year period, with the most junior application (Senior Lecturer) succeeding and 2 applications for Reader failing.

Whilst female promotion applications are impacted by the low numbers of women in the School, we have identified encouraging women to apply and supporting them to succeed as a key issue for the School.

Through the School Management Committee (via the Heads of Research Group) and the Promotion Committee, more effort has been made to identify and support staff in the application process this year. Selected staff were asked for CVs by senior staff to determine whether to encourage staff to apply for promotion. Staff who do not yet have the necessary experience are being given the opportunity to gain it. For example, being given suitable administrative tasks, or the opportunity to develop a new module. Consideration of allocating PhD students is also taken into account for junior staff. A member of the Promotion Committee is assigned to help candidates improve their application.

Note that the recent trail of Performance Development Review in the College for all staff enabled discussions concerning promotion to be discussed.

The Deputy Head (Equality and Diversity) has been active in the establishment of the first promotion workshops to be held in the College of EPS in the summer 2013. . This was also suggested from the feedback from the focus groups help by the College of EPS for all female academic staff and researchers. These sessions are to inform all staff of the application process, and are an example of good practice in other institutions.

We aim to improve the numbers of female staff applying for promotion.

Actions:

- continue to provide good mentoring and support to apply for promotion through the PDR and research groups
- actively encourage staff to attend College promotion workshops via email from HoS
- evaluate feedback from College promotion workshops and use it to inform our approach to promotions
- raise awareness of female networking opportunities within the School, College and University

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

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

The School recruits and appoints its staff in line with the University’s Recruitment and Selection Policy, but recognises that more can and will be done to attract female candidates.

The School is working to increase its proportion of female staff. There has been a steady rise in the number of female staff appointed and a new female lecturer and female Birmingham Fellow will join the School in the summer 2013, (not reflected in the current data).

Last year the School Equality and Diversity Committee approved the policy to have gender balanced selection committees for appointments to Research Fellow and Lecturer. This was achieved for all new lectureship appointments in the last year. In addition, junior female staff were

included on the appointment panels. In the last year female applicants were more successful than male applicants.

The Athena SWAN Working Group has recommended that a statement such as “Applications from women are particularly encouraged since they are underrepresented in the School” will be added to all future academic advertisements. In addition, more details will be provided in the School information to candidates concerning, for example, flexible working arrangements, friendly nature of School, support available for women.

Information on support for women in the School will be made more prominent on the School web site.

For the last vacant lectureship position, the procedures for looking after candidates during the day of presentations and interviews were improved. The candidates were shown around the campus by postgraduate students. They were provided with the chance to meet staff in the School over lunch.

We aim to attract and appoint more female staff and researchers.

Actions:

- all vacancies to include a statement encouraging women to apply
- state the family-friendly nature of the School in recruitment material
- all appointment panels to be gender balanced
- ensure the upcoming review of the School Intranet includes consideration of information relevant to female staff, such as support for maternity leave and flexible working arrangements
- establish School procedures to make candidates feel welcome on the interview day
- ensure the same procedures for appointing researchers are followed as for appointing lecturers

(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.

Most of the female staff in the School are young with young children. They need extra support following periods of maternity leave. This has been done informally with the only 2 recent instances. However, the School has recently adopted formal policies relating to maternity leave.

Academic staff members will be granted a period of study leave immediately following a period of maternity or adoption leave and be able to have a low teaching and administrative load for the teaching term following this period of study leave.

Female staff need to gain experience to satisfy the promotion criteria to Senior Lecturer. This includes excellence in 2 of teaching, research and administration. The required activities include a significant administrative position, supervising postgraduate students to completion and significant teaching development.

The new College promotion workshops to be held in the summer 2013 should help all staff understand what is required.

The School has introduced a system for advice and identification by senior staff of staff ready to apply for promotion. The outcomes of the latest promotion round have just been announced. Two (out of four) staff were promoted to Senior Lecturer. There were no applications for Reader or Professor. A new “Women in EPS” group has been formed in 2012. It will arrange networking and development training for female staff. Sessions on assertiveness and time-management will be held in the Spring/Summer 2013.

The Head of School supported the Deputy Head (Equality and Diversity) in arranging a lunch in December 2012 which all female academic staff and female researchers were able to attend.

We aim to improve the numbers of female staff satisfying the promotion criteria.

Actions:

- continue to provide good mentoring and support to apply for promotion through the PDR and research groups
- encourage female staff to attend the “Women in EPS” activities
- continue to arrange networking activities in the School for female academics and researchers
- raise awareness of female networking opportunities within the School, College and University

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?

Appraisal and career development

The appraisal process has not been particularly effective in the School in recent years. In 2012 this was addressed when the School (as part of the College of EPS) was a pilot for a new Personal Development Review (PDR), to be held once a year. The reviews were carried out by a team of trained reviewers (including 2 female). Reviewees could request a change of their allocated reviewer but none did. All non-probationary staff were reviewed. (There is a separate University process for probationary staff, detailed in section a(ii) below.)

The College provided guidance on benchmarking performance levels. The reviewee provided a CV and comments on performance for teaching, research and administration, as appropriate. Following a review interview targets were set and agreed for the next year. These were signed off by the Head of School.

The University is reviewing this process. It is too soon to know the outcome but the general feeling in the School is positive. The School will maintain a robust annual review system under the University requirements. It is expected that the Head of School will conduct all reviews in future.

Promotions

University promotion criteria and guidelines are set out on the University website and offer clear guidance on issues that particularly impact on female staff:

“The University will ensure that staff are not treated less favourably in the promotions process because of the following individual circumstances:

- Absence on maternity, paternity, parental or adoption leave
- Disability-related, ill health and injury reasons,
- Part-time or other flexible working arrangements
- Caring commitments

The University will take into account effects resulting from the above on a staff member’s ability to demonstrate sustained performance against contractual requirements, but will still expect the staff member to demonstrate the achievement of the normal quality criteria. Thus, while no dilution of the required quality of inputs and outputs would be accepted, the quantity of inputs and outputs (subject to any appropriate threshold) would be considered in the following contexts, for example:

- A female member of staff who has taken maternity leave may have a 'gap' in input and/or output. In these circumstances a reduction in quantity would be accepted.
- Where a member of staff works part-time, the quantity of their input and output would be considered in relation to their reduced working hours."

Quality of research is encouraged in the School with advice on which journals papers should be submitted to. Assessments are made of staff research outputs and meeting are held with staff deeming to fall below expected levels. Staff receive appropriate advice and are asked what the School can do to facilitate the necessary improvements.

The School does not currently offer specific development activities for female staff and, as a School with a small female population, this would not be practical. We will promote and encourage female staff to participate in the College's recently-established Women in EPS group, which will be offering formal development activities, including promotion workshops and networking and mentoring opportunities.

The School encourages staff and postgraduate students to attend the annual LMS Women in Mathematics Day. One female member of staff attended this year. She found it very valuable to meet other female mathematicians and specifically to be given career advice by a senior mathematician.

We aim to inform staff and students of the relevant development activities available.

Actions:

- encourage female staff to attend the "Women in EPS" activities
- secure funding to allow staff and students to attend the Women in Mathematics Day

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

The School has a senior member of staff who is responsible for the induction of all new staff. He will have an initial meeting with them when they arrive. He is also responsible for the personal development of all probationary staff, thus providing a coherent approach. The induction process includes a meeting with the Head of School.

Under the School's induction process each probationary member of staff is allocated a teaching and research mentor (this could be the same person). The teaching mentor and the probationary staff will observe each others' teaching. The probationers meet their mentors at least quarterly.

All new members of staff are required to complete the University's diversity training programme as part of their induction. The total completion rate across the School is currently 83%.

We recognise that our induction process should be broadened to include information on flexible working, development opportunities and information on the Women in EPS group. The current

procedures for Induction will be reviewed later this year, with a change in the member of staff responsible.

The School has a staff handbook but this needs updating in the light of recent developments.

Actions:

- review and implement a new induction process that addresses flexible working and development opportunities
- the information in the staff handbook to be considered in the forthcoming review of the School Intranet

(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.

The “Women Leading in Science and Mathematics” seminar series was initiated to show female students that it is possible to have a successful academic career and raise a family. This series was organised by the Deputy Head (Equality and Diversity) as part of her role on the Athena SWAN Working Group. It was formally recognised as part of her administrative load. Input from many members of staff was sought as to which speakers to invite. Other members of staff helped with the promotion of the seminars.

A female postgraduate student organised a meeting for undergraduate students to highlight applied mathematics research projects. This was primarily aimed at year 4 MSci students. Current postgraduate students gave talks on their research. Female students were particularly encouraged to attend.

All research groups have regular seminar series which postgraduate research students are expected to attend. The year 4 MSci students are also invited to these. Seminar organisers are encouraged to invite female speakers.

All postgraduate students also have the opportunity to present their research in the School. This is good experience for conference presentations.

The postgraduate research students have formal and informal contact with academic staff. They provide marking and tutorial assistance.

The mentoring of postgraduate research students is done informally via their supervisors.

We aim to provide more support for female students.

Actions:

- continue with talks for undergraduate students but review to ensure better participation
- showcase PhD projects to students
- insist there are at least one female speaker each term in each seminar series

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.

It has been School policy since February 2012 that appointment and promotion committees will have female representation. The lack of senior female staff means that the senior female staff are on several committees, but this situation should improve in time. Since then, junior female staff have also been included on appointment panels. The majority of committee membership is determined by named administrative posts.

The current committee representation for staff is given below:

Executive Management Team 1 female, 3 male
Management Committee 2 female, 8 male
School Education Committee 0 female, 19 male
Staff Student Committee 0 female, 7 male
Teaching Quality Committee 0 female, 15 male
Equality and Diversity Committee 6 female, 4 male
Promotions Committee 2 female, 7 male

Female representation is particularly low due to there currently being no female Heads of Research Group and no female year directors (although there have been in the past).

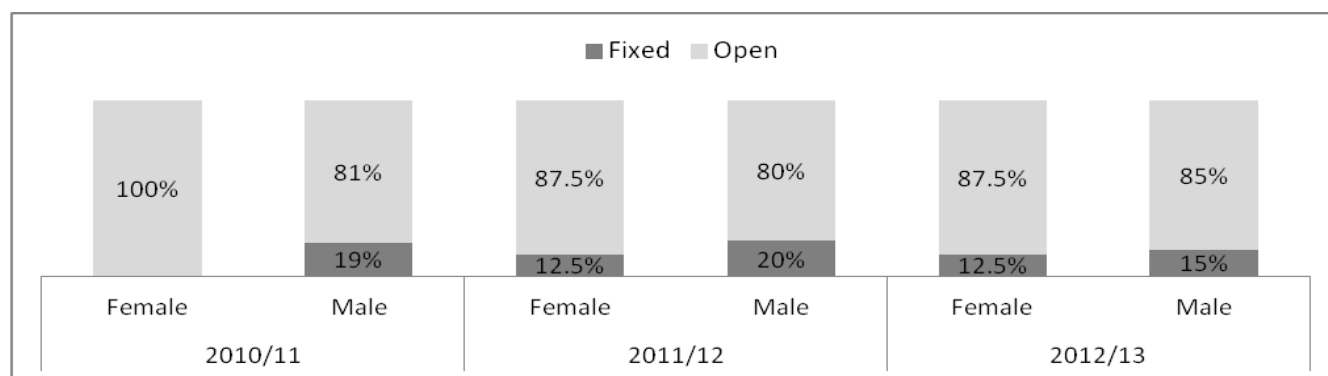
We aim to improve the gender balance on all committees.

Actions:

- to consider gender balance when reviewing committee membership
- ensure female academic staff representation on Staff Student Committee

(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.

Figure 13 - Fixed-term and open contracts (%)



Staff by gender and contract type						
2010/11	Female			Male		
	Fixed	Permanent	% fixed	Fixed	Permanent	% fixed
Researcher	0	0	0%	8	1	89%
Lecturer	0	5	0%	0	17	0%
Senior Lecturer	0	1	0%	1	4	20%
Reader	0	0	0%	0	7	0%
Professor	0	0	0%	0	9	0%
Total	0	6	0%	9	38	19%

2011/12	Female			Male		
	Fixed	Permanent	% fixed	Fixed	Permanent	% fixed
Researcher	1	0	100%	9	0	100%
Lecturer	0	5	0%	0	16	0%
Senior Lecturer	0	1	0%	0	5	0%
Reader	0	0	0%	0	8	0%
Professor	0	1	0%	0	8	0%
Total	1	7	12.5%	9	37	20%

2012/13	Female			Male		
	Fixed	Permanent	% fixed	Fixed	Permanent	% fixed
Researcher	1	0	100%	5	0	100%
Lecturer	0	5	0%	1	17	6%
Senior Lecturer	0	1	0%	0	3	0%
Reader	0	0	0%	0	5	0%
Professor	0	1	0%	0	10	0%
Total	1	7	12.5%	6	35	15%

The majority of staff on fixed-term contracts are research staff, funded by fixed-term research grants. There is a low proportion of female staff in this category. The issue for the School is in appointing more female researchers. The procedures to encourage female applications may address this imbalance.

There were no female academic staff on fixed-term contracts. The 2 male academic staff where a retired senior lecturer appointed 0.2 to help with examination processing and a new member of staff who has now been transferred to a permanent position.

We aim to attract more female researchers to the School.

Action:

- encourage more female applicants for researcher positions

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?

Gender equity is taken into account for all committee membership. The pool of female candidates for committee membership is small. So the eligible women are appointed for appointment panels and the promotion committee (in line with the new School policy). The other committees are mostly determined by administrative roles in the School. Most committees have a larger proportion of male representatives due to the much larger proportion in the School. We expect this situation to improve as numbers of female staff increase. Male representatives were included in the School Equality and Diversity Committee and the Athena SWAN Working Group. The membership of the Athena SWAN Working Group will be revised annually.

The single female professor in the School is on the College of EPS Promotion Committee, as well as the School Promotion Committee. She has been given assurances from the Head of School that she will not be put on lots of committees.

We aim to improve the gender balance on all committees.

Action:

- to consider gender balance when reviewing committee membership

- (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 administrative duties of staff are discussed in their PDR interviews. Staff are able to express an interest in a particular role. The Head of School asks all staff for teaching and administrative preferences before allocating duties for the next session.

Excellence in significant administrative duties are often used to satisfy the promotion criteria from lecturer to senior lecturer. Thus, junior staff are given the opportunity to have one of these roles. The duties with heavy loads are rotated (usually after 3 years) to allow other staff to gain experience. These include Year Directors, Welfare Tutors, Directors of Admission and Education.

The Head of School is conscious of succession planning and appoints Deputies in advance so they can get experience of the role before taking it over.

The School is currently developing a new workload model and advice has been sought from other Heads of Schools. The Head of School will shortly circulate a document to all staff indicating current considerations when allocating duties for the next session.

We aim to have a transparent workload model to account for all activities and to give a fairer allocation of duties.

Action:

- develop new workload model

(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.

The School Equality and Diversity Committee is particularly concerned with this issue. It has been discussed by the Athena SWAN Working Group. Ideally, School meetings are scheduled in term time and not at 9am or after 4pm.

There are a range of social gatherings. The newly-established mid-week morning coffee break for all staff has been welcomed by many staff. It has helped to create a more friendly working environment and is particularly good for new members of staff to meet colleagues. It is attended by the Head of School and other senior staff. It is particularly well-attended by female staff (including support staff) and female PhD students. It has been organised by the Deputy Head (Equality and Diversity).

The annual Christmas celebrations are held at lunchtime. Meals have been arranged for early evening so families can attend. Other social events with students (initiated this year) are held early evening. These include a Christmas party and a mid-term party.

We aim to consider the timings of meetings and social events.

Actions:

- develop a policy on the timing of meetings
- continue with weekly coffee break (share organisation)
- organise more celebrations and social events for staff at convenient times
- continue social events with students at convenient times

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

The staff and PhD students in the School form a diverse group of individuals, with many nationalities represented. The School is a very friendly place to work. There is a kitchen and common room for staff and postgraduate use. The weekly coffee break enables new members of staff to meet colleagues. Many members of staff have lunch regularly with other colleagues in Staff House. Several staff will accompany seminar speakers to lunch or dinner.

The Analysis Group recently held a family party for all members of the group, including PhD students and Postdoctoral Researchers.

The postgraduate students organise social events, such as a weekly cake club and a party at Christmas.

The undergraduate students run an active Maths Society which arranges activities such as quiz nights and a formal ball. These particular events are attended by some members of staff.

There have been more social events for staff and undergraduate students this past year. These include a Christmas party and a mid-term party. A weekend trip to Coniston was held in February with plans to repeat this annually. One member of staff provides mathematical games one lunchtime a week for staff and students in the Mathematics Learning Resource Centre, where students can study in the School.

An indication of female staff satisfaction in the School is provided by the results of the most recent University Staff Satisfaction Survey. Below we highlight the main issues where there was a significant (5%+) difference between positive responses for the themes relevant to communication, work-life balance and development. The results below are for all staff groups in the School and compare positive responses to each statement by gender. (Note – the data cannot be broken down to academic staff only.)

Staff Satisfaction Survey 2011

Female staff more satisfied than males (>5% difference in positive responses)

- I am able to strike the right balance between my work and home life (18% difference)
- My job makes good use of my skills and abilities (16% difference)
- Overall I enjoy the job that I do (16% difference)
- I am able to make decisions that enable me to work effectively (14% difference)
- My manager and I communicate effectively (14% difference)
- I am clear about what I am expected to achieve in my job (9% difference)

Female staff less satisfied than males (>5% difference in positive responses)

- I am valued for what I can offer the University (34% difference)
- I think there are sufficient opportunities to discuss development with my manager (30% difference)
- I have a regular opportunity to discuss my development with my manager (15% difference)
- The University does a good job of keeping me informed about matters affecting me (14% difference)
- I am able to access the right learning and development opportunities when I need to (9% difference)
- I believe I have the opportunity for personal development at the University (7% difference)

We aim to improve the interaction of staff and students in the School. Social events should be inclusive to account for our diverse staff and student body. The University Staff Survey will be used to see how female satisfaction can be improved. We have already begun to address the development issues highlighted in the current survey, and will incorporate the outcomes of the pending 2013 survey into our action plan. We will also conduct our own School survey of all staff to assess awareness of Athena SWAN issues in the School, and overall satisfaction. Suggestions for improvements will be sought.

Actions:

- organise a range of inclusive social activities for staff and students
- consider the results of the next University staff survey
- conduct a School staff survey

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

All members of academic staff are expected to participate in outreach activities. At Applicant Visit Days these include presentations to applicants and parents, master classes with applicants, small group problem workshops with applicants and talking to applicants and parents over lunch. All staff are asked to sign up for 8 activities during the year. However, effort is made to ensure a good proportion of female staff at Applicant Visit Days and University Open Days. It is ensured that

female members of staff are involved in the small group activities, in presentation roles and are available to speak to applicants and parents. The admissions team has 1 female member of staff.

The majority of female staff are happy to participate in outreach activities. The female Deputy Head of School has visited Girl's schools and attended events for female school students. She has a long-standing invitation to the annual Higher Education Conference at a local sixth form college to talk about mathematics degrees and careers. The "Big Maths Quiz", an event for 400 year 10 students, this year was presented by two female members of staff.

The Birmingham Popular Maths Lectures, an Outreach and Public Engagement initiative held in the School monthly, is hosted by a female lecturer. This is done with the express intention of raising the profile of female mathematicians in our outreach. A female professor from our School will be giving one of the lectures in the next series.

One female lecturer has done tours of outreach in China, recruiting for the last 2 years. She has been very successful in attracting students to the University. It is important to mention that outreach activities are not formally recognised as part of the current workload model since equal participation is expected amongst all staff.

A sustained contribution to outreach activities is a criterion for promotion from Lecturer to Senior Lecturer.

We aim to have a fair distribution of all staff involved in outreach activities.

Action:

- ensure a fair balance of outreach activities amongst staff

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.

Figure 14 - Maternity return rate (%)



Maternity leave rates				
Year	Instances of maternity leave		Returning staff	
2009/10	1	100%	0	0%
2010/11	2	100%	2	100%
2011/12	0	0%	0	0%

In 2010 the individual who did not return was a researcher whose contract had expired. In 2011 the two staff were 1 lecturer who returned full-time and a researcher who returned part-time (50%) for a term then full time..

We aim to provide more information to staff going on maternity leave (and to their line managers) about the options available to them on their return to work, such as reducing admin workload, to enable them to focus on re-establishing their research. Currently, such options are available by individual negotiation, but more formal and publicised arrangements are needed to ensure that both staff and line managers are aware of these options

Action:

- prepare a checklist for staff taking maternity leave

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

There has been 100% uptake for paternity leave. The University allows 2 weeks paid paternity leave. There have only been 2 cases during this period: 1 professor in 2011 and 1 lecturer in 2012. In both cases cover of their duties was arranged by other members of staff in the School well in advance.

There have been no cases of adoption or parental leave during this period.

We would like all eligible staff to take paternity leave.

Actions:

- encourage eligible staff to take paternity leave
- continue to arrange cover for staff taking paternity leave

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

There have been no applications for flexible working (part-time) by academic staff. We do not view this as a negative issue, as academic staff have a flexible working environment and many staff take advantage of this to manage their work and home commitments, without recourse to making a formal flexible working application. The School very much supports staff working flexibly.

The researcher discussed in a(i) above is on a Marie Curie grant. She had to ask for a suspension of the grant while she was on maternity leave and for an extension, both of which were granted.

The new School initiative where staff can request flexibility with their teaching timetable, due to caring responsibilities, produced 4 requests this academic year. These were for either no 9am or 5pm lectures or tutorials. These were able to be accommodated for 1 male professor and 1 female lecturer. The University timetable constraints did not allow rearrangement of the 5pm tutorial for 2 female lecturers. However, they were able to obtain funding from the College of EPS, specifically for female staff returning from a period of maternity leave, for postgraduate students to run the tutorials.

Action:

- continue seeking requests for flexible working

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

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

Figure 15 - Full-time and part-time staff (%)



2010/11

- There was 1 male part-time member of staff employed in a Senior Lecturer role. This was a retired member of staff employed to help with the examination process.

2011/12

- There was 1 female part-time member of staff employed in a Researcher role, returning from maternity leave. She was on a fixed-term contract under a research grant.

As noted above, many staff work flexibly in an informal way to accommodate work and private commitments. For example, someone who has to drop-off or pick-up a child from school can adjust their working hours to accommodate this. Staff members are able to stay at home to care for a sick child (arranging a colleague to cover for them if necessary). Members of staff are encouraged to spend time working at home and many staff do so for at least one day a week.

Staff returning from maternity leave are given options about part-time working by HR. We aim to make staff more aware of the possibility of part-time working.

Action:

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

Although there is currently no formal arrangement within the School to support female staff before they go on maternity leave, the informal flexible working system adopted by the School allows accommodation of any illness or necessary medical appointments. For example, someone suffering from morning sickness may arrange for a colleague to cover for them. Staff are able to arrange visits to the midwife or doctor by working around their teaching timetable or asking a colleague to cover for them.

Staff returning to work after maternity or adoption leave have their teaching and administrative duties removed, in the same manner as a member of staff going on study leave. (There are usually

6 staff on study leave for a term each in the academic year.) Teaching reallocation is arranged in advance in the usual way. Personal tutees are allocated a new personal tutor.

The School adopted a new policy in 2012 to grant a period of study leave following maternity leave. Returning staff will be able to have a low teaching and administrative load for the teaching term following the period of study leave. It also committed to providing funds to help with childcare costs in attending conferences or research visits. Staff can also request flexibility in the teaching timetable due to caring responsibilities.

We aim to provide better support before, during and after a period of maternity leave.

Actions:

- ensure new adopted policies following maternity (or adoption) leave are implemented
- a room will be provided for breastfeeding or expressing milk if required
- funding set aside to help with childcare costs in attending conferences or research visits

Word count: 4897 (5000 max)

Section 5 - Any other comments: maximum 500 words

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

Female staff from the School took part in focus groups held across the College to identify key issues for female academics in advancing their careers and what development needs they have.

Issues identified by the focus groups:

- Barriers to career progression primarily affect women who take time out to have families.
- Staff want access to a network of other female academics to talk to
- More structured support for mentoring would be helpful
- Opportunities to develop skills, knowledge and behaviours in specific areas would be helpful to some, and such activities should be open to all staff, not just women.
- Improving the information, guidance for and awareness of managers and Heads of Schools could help them to provide better support for female academics.
- Balancing of admin, teaching and research was felt to be a problem for women in general, and particularly for those working part time.
- Female staff may delay applying for promotion until they are certain they are ready; improvements in the transparency of the process and encouragement to apply may be helpful
- A University-wide approach led by senior managers is needed.

Recommendations

1. **Facilitate networking** so that women can make contact with others in a similar position.
2. **Mentoring** - develop a structured process to support mentoring that gives access to appropriate mentors to support different situations.
3. **Guest speakers** - Invite women in senior positions to share their experiences of developing their careers and balancing career and other commitments.
4. **Run training session / workshops** to develop specific knowledge, skills and behaviours
5. **Improve support for managers and Heads of Schools**
Provide information, guidance and training to other members of staff to support them in developing and getting the best from female academics.
6. **Make workload models more transparent**
To ensure that administrative duties are allocated fairly and that balancing of research, teaching and admin duties for part time staff does not disadvantage women academics.
7. **Develop a University-wide Academic Women's Employment Strategy**
8. **Improve support for maternity leave, part time working and promotion** by ensuring clear, transparent and effectively communicated arrangements and pro active support.

We have incorporated the focus group feedback into our assessment and action plan and will actively encourage female staff to participate in the EPS Academic Women's Group and its development activities, which have been established as a result of the focus groups.

Word count: 398

Section 6

School of Mathematics – University of Birmingham Athena Bronze Action Plan

The following issues have been identified as key for the School:

1. Increasing the proportion of female undergraduates in Year 4.
2. Increasing the numbers of female PhD students.
3. Increasing the proportion of female staff and researchers.
4. Enabling more female staff to be promoted.
5. Improving the gender balance on all committees.
6. Developing a transparent workload model.
7. Considering the timings of meetings and social events.
8. Improving support for staff before, during and after a period of maternity (or adoption) leave.
9. Improving information available to staff to ensure a healthy work-life balance.

The School of Mathematics Athena Working Group will have responsibility for implementing the action plan and will report to the School Equality and Diversity Committee on its progress and impact over the next three years.

Abbreviations used in the action plan:

DGS Director of Graduate School
EDC Equality and Diversity Committee
HoE Head of Education
HoED Head of Equality and Diversity
HoS Head of School
HR Human Resources
PDR Personal Development Review
PGT Postgraduate Taught
SMC School Management Committee
SSC Staff Student Committee
TQC Teaching Quality Committee

School of Mathematics – University of Birmingham

Athena Bronze Action Plan

1. Undergraduate students			
Action	Responsible person/team	Timescale	Success measure/monitoring
1.1 Increase numbers of female undergraduate students			
(a) continue to have female students and staff visible on Open Days and Applicant Visit Days	Admissions Tutor	Ongoing	Positive feedback from Applicant Visit Days.
(b) Admissions Team to monitor data on applications, offers and acceptances by gender and report annually to EDC	Admissions Tutor	Start autumn 2013 Annually thereafter	Increase in proportion of female undergraduate students.
1.2 Monitor female student achievement			
(a) the School Teaching Quality Committee to continue monitoring student performance annually to determine if further action necessary	Year 3 Director and MSci Director	Ongoing	Monitor results for gender bias.
1.3 Improve numbers of female PhD students			
(a) continue with the “Women Leading in Science and Mathematics” lecture series for undergraduate students but review timing to have better participation and monitor impact	HoED, HoE, DGS	Set up summer 2013 Run during 2013/14 academic year	HoED to monitor attendance and ratio of female:male students in year 4. DGS to report on numbers of applications and acceptances by female PhD applicants. Review after 1 year.

(b) showcase PhD projects to undergraduate students	DGS and Heads of Research Groups to arrange	Start autumn term 2013 Annually thereafter	DGS to report on numbers of applications and acceptances by female PhD applicants.
(c) set up a working group to suggest further initiatives	DGS	Autumn term 2013	DGS to monitor impact of any initiatives on numbers of new female PhD students.
1.4 Social events			
(a) continue social events with students at convenient times (more inclusive)	Senior Tutor, SSC	Ongoing	Improved student satisfaction. ST to monitor participation.
2. Postgraduate students			
Action	Responsible person/team	Timescale	Success measure/monitoring
2.1 Increase numbers of female PGT students			
(a) the Graduate School to report female:male PGT student ratio annually to EDC	Deputy DGS	Start autumn 2013 Annually thereafter	Want an increase. Report to EDC.
(b) Graduate School to consider appropriate action to increase the numbers of female PGT students	Deputy DGS, Admission Leads for PGT programmes	Start autumn 2013 Annually thereafter	Impact of action taken results in an increase.
(c) Graduate School to monitor performance of PGT students annually and report to EDC	Deputy DGS	Start autumn 2013 Annually thereafter	No gender bias in results.
(d) review the provision of special revision classes for PGT students	Deputy DGS, Senior Tutor	Autumn 2013	Improved examination results for PGT students.
2.2 Policy on interviews for PhD students			
(a) Graduate School to consider a policy on gender balance for interviews of PhD applicants	DGS, Heads of Research Groups	Autumn 2013	Improved acceptance rate from female applicants.
2.3 Seminar series			
(a) insist there are at least one female	HoS, seminar organisers	Start summer 2013	HoED to monitor list of speakers.

speaker each term in each seminar series			
3. Supporting and advancing women's careers			
Action	Responsible person/team	Timescale	Success measure/monitoring
3.1 Increase numbers of female research staff			
(a) encourage more female applicants for researcher positions	HoS, grant holders	Start summer 2013 Ongoing	Grant holders to report number of female and male applicants to EDC following appointment process.
(b) ensure the same procedures for appointing researchers are followed as for appointing lecturers	HoS, grant holders	Start summer 2013 Ongoing	HoED to monitor.
3.2 Increase numbers of female staff			
(a) all vacancies to include a statement encouraging women to apply	HoS, HR	Summer 2013 Ongoing	Appointment panels to report numbers of female and male applicants to EDC following process.
(b) encourage female applications by demonstrating family-friendly School in recruitment material	HoS, HoED, HR	Start summer 2013 Completed December 2013 Review annually	Appointment panels to report numbers of female and male applicants to EDC following process.
(c) ensure a gender balance in all appointment processes (short listing and interviewing)	HoS, Head of Research Groups	Ongoing	Appointment panels to report list of staff involved to EDC.
(d) establish School procedures to make candidates feel welcome on the interview day	HoS, HoED, Heads of Research Groups	Implement autumn 2013	Continuous review.
(e) ensure the upcoming review of the School Intranet includes consideration of information relevant to female staff, such as support for maternity leave and flexible working arrangements	HoS, HoED	Start autumn 2013	Improved staff satisfaction.

3.3 Support staff through promotion			
(a) continue to provide good mentoring and support to apply for promotion through the PDR and research groups	HoS, Heads of Research Groups, Promotion Committee	Ongoing	Promotion committee to report applications and outcome by gender to EDC.
(b) actively encourage staff to attend College workshops via email from HoS	HoS	Ongoing	HoED to monitor attendance and report to EDC.
(c) evaluate feedback from College promotion workshops and use it to inform our approach to promotions	HoS	Start summer 2013	Improvement in promotion rates.
(d) raise awareness of female networking opportunities within the School, College and University	HoED	Ongoing	HoED to monitor uptake.
(e) continue to arrange networking activities in the School for female academics and researchers	HoED	Ongoing	Improved staff satisfaction results.
(f) secure funding to allow staff and students to attend the Women in Mathematics Day	HoS, Head of Research, HoED	Start autumn 2013 Annually thereafter	More staff and students able to attend.
3.4 Induction process			
(a) review and implement a new induction process that addresses flexible working and development opportunities	HoS, Deputy Head responsible for Induction	Start autumn 2013 Fully implement autumn 2014	Improved staff satisfaction.
(b) the information in the staff handbook to be considered in the forthcoming review of the School Intranet	HoS	Start autumn 2013	More important information available.
3.5 Workload model			
(a) develop new workload model	HoS, Deputy Heads of School	Start summer 2013 Implement autumn 2013	Improved staff satisfaction.
(b) ensure a fair balance of outreach	Admissions Tutor	Start autumn 2013	Improved staff satisfaction.

activities amongst staff		then ongoing	
3.6 Working day			
(a) develop a policy on the timing of meetings	EDC	Start autumn 2013	All meetings in family-friendly hours.
(b) continue seeking requests for flexible working	HoED	Ongoing	HoED monitor requests and outcome. Report to EDC.
3.7 Support for staff and PhD students before, during and after maternity (or adoption) leave			
(a) prepare a checklist for staff and PhD students taking maternity leave	HoS, EDC, HR	Start autumn 2013 Complete summer 2014	Positive feedback from School staff survey.
(b) promote the option of flexible working in School fact sheet (to be produced)	HoS, EDC, HR	Fact sheet completed summer 2014	Positive feedback from School staff survey.
(c) ensure new adopted policies following maternity (or adoption) leave are implemented	HoS, HoE	Implemented when required	EDC to monitor arrangements.
(d) funding set aside to help with childcare costs in attending conferences or research visits	HoS, Deputy Head of Research	Start autumn 2013 then ongoing	Deputy Head of Research to report annually to EDC.
(e) a room will be provided for breastfeeding or expressing milk if required	HoED	When necessary	HoED to monitor uptake.
4. Organisation and culture			
Action	Responsible person/team	Timescale	Success measure/monitoring
4.1 Committee membership			
(a) to consider gender balance when reviewing committee membership	HoS, SMC	Start summer 2013	Improved gender balance. Monitored by HED.

		Complete autumn 2013 Annually thereafter	
(b) ensure female academic staff representation on Staff Student Committee	HoS, SMC	Autumn 2013 Annually thereafter	Improved student satisfaction.
4.2 Social interactions			
(a) continue with weekly coffee break (share organisation)	All staff	Ongoing	Improved working atmosphere. Results of School staff survey.
(b) organise more celebrations and social events for staff at convenient times	HoS, HoED, various staff	Ongoing	More opportunity of social interaction for staff. Results of School staff survey.
4.3 Staff satisfaction			
(a) consider the results of the next University staff survey	HoS, SMC	End of 2013	Improved satisfaction rates. SMC to monitor.
(b) conduct a School staff survey	EDC	Autumn 2013	EDC to analyse results.
4.4 Paternity leave			
(a) encourage eligible staff to take paternity leave	HoS	Ongoing	100% take up of paternity leave. EDC to monitor.
(b) continue to arrange cover for staff taking paternity leave	HoS, HoE, Senior Tutor	Ongoing	All commitments covered.

