Name of institution	University of Essex	
Department	Mathematical Sciences	
Focus of department	STEMM √	AHSSBL
Date of application	18 May 2018	
Award Level	Bronze √	Silver
Institution Athena SWAN award	Date: September 2013	Level: Bronze
Contact for application Must be based in the department	Dr Xinan Yang	
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Departmental website	https://www1.essex.ac.uk/maths/	

Notes on Application

Abbreviations used throughout the document:

AS	Athena SWAN
ASE	Academic Staff primarily with Education Responsibilities
ASER	Academic Staff with Education and Research Responsibilities
ASR	Academic Staff primarily with Research Responsibilities
DoE	Director of Education
DoM	Director of Marketina
DoR	Director of Research
DoPG	Director of Postaraduate
DMS	Department of Mathematical Sciences
EIMS	Equality and Inclusive in Mathematical Sciences website
GPS	Good Practice Scheme
GTA	Graduate Teaching Assistant
HESA	Higher Education Statistics Agency
НоD	Head of Department of Mathematical Sciences
IFOA	Institute and Faculty of Actuaries
КІТ	Keeping in Touch
КТР	Knowledge Transfer Partnership
LMS	London Mathematical Society
PDR	Personal Development Review
PG	Postgraduate
PGR	Postgraduate Research
PGT	Postgraduate Taught
PSS	Postgraduate Support Scheme
PYO	Placement Year Officer
RAE	Research Assessment Exercise
REO	Research and Enterprise Office
REF	Research Excellent Framework
SAO	Study Abroad Officer
SAT	Self-Assessment Team
SBS	School of Biological Sciences
SHHS	School of Health and Human Sciences
SSLC	Staff Student Liaison Committee
STEM	Science, Technology, Engineering and Mathematics
UoE	University of Essex
UG	Undergraduate
UROP	Undergraduate Research Opportunity Programme
WAM	Workload Allocation Model
WISE	A campaign to promote Women In Science, technology and
	Engineering

Throughout this application we are using the most recent figures that were available at the time of writing each section. The data is presented by academic year 2013/14, 2014/15, 2015/16, 2016/17 and labelled accordingly. Please note that when we describe our current data, this refers to the academic year 2017/18. When we use the term 'Staff Survey' we are referring to the latest questionnaire undertaken in August 2017 as part of this application.

The University has achieved an institutional bronze Award in September 2013 and a Gender Equality Charter Mark (GEM) in November 2014. It is also a WISE member. In June 2017 the Department has

signed up to the LMS (London Mathematical Society) Good Practice Scheme (GPS) which aims to support mathematics departments to embed equal opportunities for women within their working practices.

Throughout the self-assessment process, we identified current good practice, implemented actions to improve gender equality following the University's Bronze SWAN award, and identified areas for improvement to future work (as detailed in our Action Plan).

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

Department of Mathematical Sciences University of Essex Colchester Essex CO4 3SQ

Equality Charters Manager Equality Challenge Unit 7th Floor, Queens House 55/56 Lincoln's Inn Fields London WC2A 3LJ

17th May 2018

To whom it concerns,

As Head of the Department of Mathematical Sciences at the University of Essex I am delighted to support our application for an Athena SWAN Bronze Award. Aiming for equality at all career stages, from undergraduates all the way to professors and senior management, the vision of the overall working culture that we strive to embed is informed by the principles set out in the Athena SWAN Charter. We value the opportunity to engage in this process to formalize our commitment to an inclusive culture throughout the whole department.

Since I became Head of Department in 2016 I have supported our female colleagues – only 2 of 18 academics are female – to advance their careers and aim for promotion to senior staff.

Moreover, I introduced an annual equality budget – currently £2,500 – to support equality activities for students and staff. This supported, for example, participation in a conference on Women in Mathematics and it increased the individual budget of the two female academics by 50% in 2017-18. I have asked that the seminar organiser aims for at least 50% female external speakers. The result of this is that in the current academic year, seven of the 18 external speakers (39%) were female, compared with a total of five external female speakers in the previous three years.

We actively promote our Equality and Diversity Policies and the Department's commitment to flexible working to enable a good work-life balance. To support part time colleagues and those with caring responsibilities I have changed the time of departmental meetings so that they are held between 11am and 3pm. The meetings last 2 hours and start or end with a networking/socialising lunch. Similarly we aim to hold all admin meetings between 11am and 3pm.

Unsupportive language and behaviour are not acceptable. I encourage students and staff to contact the Harassment Advisory Network of the University for advice and support.

I introduced the use of the department's meeting room by all members of the Essex Mathematical Sciences community of students, alumni, friends and staff. To ensure that the room is available for informal use by our community I have arranged that from 9-10am and 1-2pm the room can no longer be booked for meetings.

I ensure that students play an important role in the department, for example as student representatives or as SSLC members. Working alongside staff members, our students form an integral part of the team delivering the Department's Open and Applicant days. Research students are a crucial part of the culture of the Department.

I confirm that the information presented in the application, including qualitative and quantitative data is an honest and true representation of the department. I give my full support to this application and look forward to supporting our SAT team in delivering on this agenda.

Yours sincerely,

Professor Berthold Lausen

Head of Department of Mathematical Sciences

Words: 500

2. DESCRIPTION OF THE DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

The Department of Mathematical Sciences (DMS) is one of the founding departments of the University of Essex and one of six Schools/Departments in the Faculty of Science and Health. The DMS is a vibrant and expanding department ranked 23 for the subject area in the 2018 Times Good University Guide and offers degrees in Mathematical Sciences with strong emphasis on Applied Mathematics, Statistics, Actuarial Science, Data Science and Operational Research. This diversity makes the Department dynamic and forward looking. Our ambition is to offer attractive, useful and viable degree programmes that are challenging and inspiring to our students.

We have set ourselves ambitious objectives for development of our research, education and student numbers and made substantial progress in student recruitment in 2017/18. Understanding students' needs and creating an inclusive environment for all genders has been crucial in achieving this. We recently launched our Advisory Board in September 2016 with involvement from high profile women in Mathematical Sciences such as Dr Catherine Hobbs who has been active in the London Mathematical Society (LMS) Women in Mathematics Committee, and Sharon Tipconey (Central Coordinator Further Mathematics Support Programme) and employers and alumni.

Prior to 2013 the DMS had been a small department with only ten full-time academics (all males from 2007 to 2013). It has grown significantly in the last four years with substantial investments in Applied Mathematics and Actuarial Sciences, which has brought eight new full-time academic posts, all at Lecturer/Senior Lecturer levels, taken by seven males and one female. In addition, one replacement post was filled by a female staff member. The current (2017/18) population sizes in DMS are shown in Figure 1 with national benchmarks obtained from the LMS Good Practice Scheme (GPS) benchmarking data. Currently, our 18 full-time academic staff (headcount) consists of four Professors (males), two Readers (males), seven Senior Lecturers (males, one with 20% contract), five Lecturers (3 males, 2 females). We also employ three part-time Lecturers (males) and three Postdoctoral Research Officer (2 males, 1 female) working under fixed-term contracts, ten GTAs (3 males, 7 females), and five professional services staff (females, 2 full-time, 1 on 75% and 2 on 50% contracts). There are 28 PGR students (13 males, 15 females), 29 PGT students (19 males, 10 females) and 229 undergraduates (145 males, 84 females).



Figure 1: DMS current population 2017/18



Figure 2: DMS current population 2017/18

As shown in Figures 1-2, gender imbalances are seen at nearly all levels with the most significant underrepresentation of female staff being seen amongst academic staff and researcher staff (9%) comparing to the national benchmark (21%). Although we have made a big step from no female to 9% female representation of academic staff since 2013, the lack of females in higher level posts such as Senior Lecturer and Professor remains a major concern. We are, therefore, aiming to improve our support provided to junior female staff members (Actions 1.7, 4.1, 5.1, 5.4-5.9). Women's representation at GTA and PGR levels are significantly higher than men, which demonstrates a good progression pipeline of women's education and development opportunity provided by DMS.

Actions:

- Action 1.7: Maintain the DMS Equality budget (£2,500 in 2017/18) and use it to implement equality/gender actions, e.g. organising or participating in Women in Mathematical Sciences events, support female's research/educational visits, etc.
- Action 4.1: Make use of the Equality and Inclusive in Mathematical Sciences (EIMS) webpage to attract more female applicants. Keep it updated with the newest information on promotion, training, and flexible working policies.
- Action 5.1: Review the career paths of current male and female staff, analyse and understand the differences.
- Action 5.4: Make the mentoring process more closely linked with appraisal (invite mentor to attend appraisal/PDR meetings of mentee). Ensure personal development needs are discussed in line with the permanency and promotion criteria and feedback to workload allocation.
- Action 5.5: Organize formal/informal events to encourage communications with staff at all career stages to share experiences in career development.
- Action 5.6: Support/Encourage qualified female staff on leadership training courses, e.g. Aurora, Future Leadership programme.
- Action 5.7: Consider publishing successful promotion applications to members of the department, as a good practice to follow.
- Action 5.8: Ensure the mentoring system and Appraiser process work effectively in supporting permanency and promotion applications. Through the PDR process guidance will be given to staff about when they may be well placed to apply for promotion, having first been discussed at the Research and Education committees.
- Action 5.9: Continue monitoring research publications of female staff and support them to work towards successful REF 2021 submission.

Words: 498

3. THE SELF-ASSESSMENT PROCESS

Recommended word count: Bronze: 1000 words | Silver: 1000 words

(i) a description of the self-assessment team

Table 1 lists all Self-Assessment Team (SAT) members and their roles played in the self-assessment process. The SAT consists of seven full-time academics (5 males, 2 females), three professional services staff (females), two PhD students (females) and one Postdoctoral RA (female) from DMS, supported by one female staff member from the Faculty. The SAT consists of individuals who work full-time, part-time or flexibly, and individuals from dual career families and/or having current or past childcare responsibilities. There is a good coverage of all grade levels in the academic SAT members (2 professors, 1 reader, 2 senior lecturers, 2 lecturers and 1 postgraduate researcher). There is representation from those involved with the Department's recruitment and promotion processes and those with Departmental and University management responsibilities. We also invited UG/PGT students to join the SAT but we were unable to recruit any (Action 1.1). Male staff are currently underrepresented in the SAT (Action 1.2).

Member	Gender	Profile
Dr Xinan Yang (co-	Female	Lecturer in Operational Research;
Lead)		
Dr Gerald Williams	Male	Reader in Algebra; Has held a range of senior administrative
(co-Lead)		positions such as DoR, Education Committee member, Exams Officer.
Professor Berthold	Male	Professor in Statistics; Holds overall
Lausen (HoD)		responsibility for implementation of gender equality policies in the
		department.
Ms Salma Al Arefi	Female	Recently
		appointed as a KTP Research Associate in DMS.
Ms Awatf Alwiya	Female	Full time PhD student;
Mrs Vicki	Female	Undergraduate Administrator;
Cantegreil		
Mrs Gokce Caylak	Female	Full time PhD student;
Dr Haslifah Hasim	Female	Lecturer in Actuarial Science;
Professor Peter	Male	Professor of Pure Mathematics; HoD 2005-11; member of
Higgins		DMS since 1990;
Mrs Shauna	Female	Graduate Administrator;
Meyers		
Dr Christopher	Male	Senior Lecturer in Mathematics; DoE; Central Coordinator for
Saker		the Further Mathematics Support Programme;
Mrs Alex Seabrook	Female	Faculty Manager;
Dr Alexei Vernitski	Male	Senior Lecturer in Mathematics; Admissions Officer;
Ms Claire Watts	Female	; Department Manager; Heads up the Administrative team.

Table 1: List of Self-Assessment Team (SAT) members

Actions:

- Action 1.1: Involve UG and PGT students in the SAT to provide a more comprehensive view of all levels.
- Action 1.2: Review and refresh SAT membership annually and record on the Work Allocation Model (WAM). Increase the representation of male staff in SAT, maintaining a good balance between genders.

(ii) an account of the self-assessment process

Since the University of Essex was awarded an Athena SWAN Bronze Institutional Award in September 2013, the DMS has been exploring the possibility of applying for a Departmental Award. Following the significant expansion of the Department during 2013-2016, the HoD and Executive Dean for the Faculty decided to bring the equality issue into agenda and in March 2016 appointed Dr Yang to lead the departmental AS application; the first SAT meeting was held in April 2016. The fact that this leadership role was entrusted to a junior staff member reflects the confidence that the HoD holds in Dr Yang's leadership capabilities, and the fact that in a relatively small department substantial administrative and leadership positions are necessarily held by junior staff members. (Other recent examples include Admissions Officer and Graduate Director. Success in such roles has been of benefit to staff when applying for permanency/promotion.) The significant workload involved in this leadership role is fully understood by the Department and University, included in the WAM and recognised in reward processes e.g. applications for bonus/increments.

In November 2016 DMS submitted an application (under the pre-May 2015 scheme), which was ultimately unsuccessful. Following feedback from that application (April 2017), a senior co-lead, Dr Williams (Reader) was appointed to support and work alongside Dr Yang. The SAT was also refreshed at this time in response to evolving staff obligations and sabbatical arrangements. 100 hours for the AS lead and 50 hours for the co-lead were assigned in the Department's WAM.

The SAT consists of five subgroups (Table 2), each focused on an area of the application. The refreshed SAT first met in April 2017 to review the unsuccessful application. Two full-SAT meetings were held in July and September to oversee the application, while subgroups met more frequently as necessary to discuss progress and issues arising and to work jointly on specific sections. The lead also meets formally and informally with every subgroup to provide support. All SAT members, the Faculty Executive Dean, the University SWAN Steering Group have reviewed and commented on the Department's practice and the application.

Subgroups	Focus	Section(s) in application	Lead
Subgroup 1	Student/staff data analysis	Section 4	Dr Xinan Yang and Mrs Shauna Meyers
Subgroup 2	Key career transition points	Section 5.1	Dr Alexei Vernitski
Subgroup 3	Career development	Section 5.3	Dr Haslifah Hasim
Subgroup 4	Flexible working	Section 5.5	Dr Gerald Williams
Subgroup 5	Organisation and culture	Section 5.6	Dr Christopher Saker

Table 2:	Subaroups	and focus	areas
	e a g. e a. pe		00

The DMS has registered as a supporter of the London Mathematical Society (LMS) Good Practice Scheme in June 2017 and supported SAT members to participate in various events such as contributed to the LMS Benchmarking Survey. As the lead Xinan supports the working parents in the DMS as a parent mentor. Members of the SAT have contributed to various events advancing female careers such as the University's Women in STEM video featuring in 2015 (Figure 4),

the Ada Lovelace Day in October 2017 (Figure 5), the International Women's Day. The DMS AS lead has also joined the institutional AS SAT and contributed to the institutional Bronze submission in November 2017. The SAT has also developed links and consulted with other SWAN leads/authors internally and externally for feedback on the application



Figure 3: Photo of one Self-Assessment Team meeting in October 2016

Figure 4: Screenshot of Ms Salma Alarefi's participation in "Women in STEM video" in 2015, available at https://vimeo.com/131555881



The SAT organised a number of events to assess the Department's position on gender equality. To understand how individuals experienced their work/study environment and what improvements were needed to ensure equality of opportunity, the SAT conducted a departmental Staff Survey (August 2017) and a departmental Student Survey (October 2017). Staff Survey questions were grouped

according to the investigation needs, with different sets of questions asked for academic staff and for professional services staff, reflecting the different natures of their roles (**Action 1.3**). Staff Survey results (response rate 67%) were interpreted and incorporated into the relevant sections of this submission. However, the Student Survey response rate (22.3%) was below the threshold considered representative of the population surveyed and therefore results were not included in this submission (**Action 1.4**). As an alternative route of receiving students' feedback, students were given an opportunity to provide feedback on this through the termly SSLC meetings.



Figure 5: Dr Xinan Yang's presentation on the Faculty's the Ada Lovelace Day on October 10, 2017

Actions:

- Action 1.3: Further revise Staff Survey questions, ensuring they meet the investigation needs of each target group (academic or professional services staff).
- Action 1.4: Find effective ways to improve the response rate of Student Survey.

(iii) plans for the future of the self-assessment team

Beyond application submission, the SAT and HoD will continue to meet termly to monitor progress against the action plan, promote the Athena SWAN agenda and plan future activities. In detail, we will feature the report from AS SAT lead as a standing agenda item at departmental meetings to ensure all staff members are aware of ongoing work and developments concerning gender equality issues (Action 1.5). We will review and refresh SAT membership annually and reflect everyone's contribution on the WAM (Action 1.2). The assignment of the lead and co-lead will also be reviewed periodically. However, to ensure stability of the team we do not expect frequent turnover in these roles. We will monitor Staff and Student data annually and report to the relevant Department and University committees (Action 1.6). We will maintain the DMS Equality budget (£2,500 in 2017/18) and use it to implement equality/gender actions, e.g. organising or participating in Women in Mathematical Sciences events, support female's research/educational visits, etc. (Action 1.7). The Lead, with support from the co-Lead, will oversee the implementation of the action plan and ensure that individual subgroups carry over their specific actions as detailed in the plan. However, the HoD holds overall responsibility.

Actions:

- Action 1.5: Report from AS SAT lead to feature as a standing agenda item at departmental meetings to ensure all staff members are aware of ongoing work and developments concerning gender equality issues.
- Action 1.2: Review and refresh SAT membership annually and record on the Workload Allocation Model (WAM).
- Action 1.6: Monitor Staff and Student data annually. Breakdown the gender uptake values by degree titles to inform departmental development strategy. Consider to publish results on EIMS webpage to ensure transparency.
- Action 1.7: Maintain the DMS Equality budget (£2,500 in 2017/18) and use it to implement equality/gender actions, e.g. organising or participating in Women in Mathematical Sciences events, support female's research/educational visits, etc.

Words: 1000

4. A PICTURE OF THE DEPARTMENT

Recommended word count: Bronze: 2000 words | Silver: 2000 words

4.1. Student data

(i) Numbers of men and women on access or foundation courses

n/a

(ii) Numbers of undergraduate students by gender

Number of UG students

 Table 3: DMS UG Data: Number of Full-time students by gender (no part-time UG students)

		Full-time						
		2013/14	2014/15	2015/16	2016/17			
Female	Count	71	101	100	75			
	%	45.2%	45.1%	47.8%	41%			
Male	Count	86	123	109	108			
	%	54.8%	54.9%	52.2%	59%			
Grand Total	Count	157	224	209	183			
	%	100%	100%	100%	100%			

 Table 4: Benchmarking UG Data: Number of Full-time and Part-time students by gender

			Full-	time		Part-time				
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17	
Female	%	38.20%	37.50%	36.00%	35.24%	41.90%	29.10%	35.60%	20.00%	
Male	%	61.80%	62.50%	64.00%	64.76%	58.10%	70.90%	64.40%	80.00%	
Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100%	

Table 5: UG Whole Sector	⁻ Data: Number of	^F Full-time and I	Part-time students	by gender
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			Full-	time		Part-time				
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17	
Female	%	38.70%	37.80%	37.00%	36.60%	37.60%	37.70%	38.50%	39.55%	
Male	%	61.30%	62.20%	63.00%	63.40%	62.40%	62.30%	61.50%	60.45%	
Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

Tables 3-5 and Figure 6 show the total number of UG students (in all three years) in the DMS, the benchmark group and the UK, respectively. Benchmark Group are the Mathematics departments of a similar size as DMS, comprising: Kent (Bronze 2014), UEA (Bronze 2015), Brunel (Bronze 2014), City, Sussex (Bronze 2016). The proportion of female students in DMS is consistently above 40% in contrast to the Benchmark and Whole Sector data.



UG applications, offers and acceptances

Table 6 and Figure 7 show the number of undergraduate applications, offers and acceptances. The number of applications made by female candidates is consistently lower than that made by males, while is in line with the proportion of female A-level Mathematics students (38.8% in 2015). A small drop is seen in year 2016/17. In 2017/18 we started interviewing applicants. Female staff and student ambassadors have been involved in the interviews and other UG open day/welcoming events to ensure the environment is female friendly. However, we understand this will not attract more applications since all participants of these events have already applied to us. We will collect data and feedback from outreach activities so as to review our practice in gender equality in recruiting events (Action 2.1). We also expect that by getting the Athena SWAN Bronze award and promoting it on the EIMS webpage, DMS will gain better reputation in gender equality to make it more attractive to females (Action 2.2).

We also reviewed the 2015/16 and 2016/17 female:male applicant data by courses and identified four courses that are believed more attractive for female students and two for males. Nevertheless most of them involve small numbers compared to the G100-Mathematics, which has overall higher male intake than female. We will use the Applicant Day and interview to understand why certain courses are more attractive to females so as to guide our curriculum design, such as introducing more optional modules for some courses, and/or direct our advertisement of certain courses by emphasising the aspects that may appeal to female applicants (Action 2.3).

The offer rate is nearly the same for male and female applicants. The acceptance rate for females was higher than that for males in 2013/14 but gradually converged to the same level thereafter (same as the percentage of females receiving an offer).

		2013/14		2014/15			2015/16			2016/17			
		Арр	Off	Acc									
Female	Count	159	130	24	139	112	30	164	132	27	148	126	21
	%	39.5 %	38.9 %	54.6 %	41.3 %	41.0 ∞	48.4 %	41.1 %	40.9 ∞	39.1 %	36.0 %	36.6 %	36.8 %
		/0	/0	/0	/0	/0	/0	/0	/0	/0	/0	/0	/0
Male	Count	244	204	20	198	161	32	245	191	42	263	218	36
	%	60.6 %	61.1 %	45.5 %	58.8 %	59.0 %	51.6 %	59.9 %	59.1 %	60.9 %	64.0 %	63.4 %	63.2 %
Grand	Count	403	334	44	337	273	62	409	323	69	411	344	57
Total													
	%	100 %											

 Table 6: UG applications, offers and acceptances by gender; "App" for the number of applications,

 "Off" for the number of offers, "Acc" for the number of acceptances



Figure 7: UG applications, offers and acceptances by gender

Actions:

- Action 2.1: Collect gender data and feedback from outreach activities so as to review our practice in gender equality in recruiting events.
- Action 2.2: Make use of the EIMS webpage to attract more female UG/PG applicants by promoting Athena SWAN and showcasing female role models, possible career paths, women's network and childcare services.
- Action 2.3: Use the UG applicant interview to understand why certain courses are more attractive to females to guide our curriculum design, such as introducing more optional modules

for some courses, and/or direct our advertisement of certain courses by emphasising the aspects that may appeal to female applicants.

UG results by gender

Table 7 and Figure 8 show the proportion of female/male students graduating with different degree results. Gender does not seem a key indicator as to degree outcome. For instance, over the last two years the number of women who graduated with a First Class degree numbered 20 and the number of men was 22. We will further monitor degree outcomes by gender to ensure that both female and male students are supported to achieve their potential (Action 3.1).

		,, _,, _															
		2013/14				2014/15			2015/16			2016/17					
		1 st	2:1	2:2	3 rd	1 st	2:1	2:2	3 rd	1 st	2:1	2:2	3 rd	1 st	2:1	2:2	3 rd
	Count	4	11	12	1	10	11	1	1	11	10	10	3	9	5	3	1
Female	%	14.3 %	39.3 %	42.9 %	3.6 %	43.5 %	47.8 %	4.3 %	4.3 %	32.4 %	29.4 %	29.4 %	8.8 %	50.0 %	27.8 %	16.7 %	5.6 %
	Count	16	19	15	2	13	15	9	0	11	5	11	2	11	8	4	2
Male	%	30.8 %	36.5 %	28.8 %	3.8 %	35.1 %	40.5 %	24.3 %	0.0 %	37.9 %	17.2 %	37.9 %	6.9 %	44.0 %	32.0 %	16.0 %	8.0 %

Table 7: UG degree results by gender



Figure 8: UG degree results by gender

Actions:

• Action 3.1: Further monitor UG degree results data to ensure neither male nor female is disadvantaged throughout their education. Obtain data on students who fail.

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

Number of PGT students

Tables 8-10 and Figure 9 give the breakdown of the PGT students in DMS, benchmark groups and the UK, respectively. Unlike UG, the proportion of female students in PGT courses is not so stable; in some years it is well above the national/benchmark groups (2013/14 and 2015/16) whilst in some others below. There is a drop in 2016/17 (22.7%). Looking at the application data (Table 11) we realise the reason lies in the acceptance rate. (See later for actions). Part-time students' data is too small to allow an interpretation.

			Full-	time		Part-time				
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17	
Female	Count	9	11	10	5	0	0	0	0	
	%	45.0%	30.6%	52.6%	22.7%	0.0%	0.0%	0.0%	0.0%	
Male	Count	11	25	9	17	1	1	0	1	
	%	55.0%	69.4%	47.4%	77.3%	100%	100%	0%	100%	
Grand	Count	20	36	19	22	1	1	0.0%	1	
Total	%	100%	100%	100%	100%	100%	100%	0.0%	100%	

Table 8: DMS PGT Data: Number of Full-time and Part-time students by gender

Table 9: Benchmarking PGT L	Data: Number of Full-time and	Part-time students by gender
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			Full-	time		Part-time						
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17			
Female	%	39.00%	42.10%	43.30%	35.29%	17.30%	8.30%	19.90%	0.00%			
Male	%	61.00%	57.90%	56.70%	64.71%	82.70%	91.70%	80.10%	0.00%			
Grand Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%			

			Full-	time		Part-time					
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17		
Female	%	35.70%	39.80%	37.40%	37.46%	22.50%	26.10%	25.80%	28.46%		
Male	%	64.30%	60.20%	62.60%	62.54%	77.50%	73.90%	74.20%	71.54%		
Grand Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		



Figure 9: Comparison of full-time and part-time PGT students' data

PGT applications, offers and acceptances

As shown in Table 11 and Figure 10, the number of male and female applicants is fairly constant – approximately 36% of applicants are female. This is broadly in line with Table 3 which shows that nationally 37-38% of UG students in Mathematical Sciences are female. The ratio of offers made to females is slightly higher than that to males and has been stable over recent years. However, the rate of female acceptances is fluctuating, which causes the fluctuation in female PGT population (Table 8, note that 2013/14 application is for 2014/15 cohort). To improve conversion rates the department contacts all successful PGT/PGR applicants in 2015/16 to check their visa status and personal needs (most PGT candidates are oversea students). This seems work to be working well in increasing conversion rates by making students feeling more welcome, especially for females (Action 2.4).

		2013/14			2014/15			2015/16			2016/17		
		Арр	Off	Acc									
Female	Count	84	59	14	96	74	16	97	71	17	100	63	11
	%	34.8%	38.6%	43.8%	36.2%	40.4%	29.6%	35.0%	39.2%	43.6%	37.5%	40.7%	28.2%
Male	Count	157	94	18	169	109	38	180	110	22	167	92	28
	%	65.2%	61.4%	56.3%	63.8%	59.6%	70.4%	65.0%	60.8%	56.4%	62.5%	59.3%	71.8%
Grand	Count	241	153	32	265	183	54	277	181	39	267	155	39
Total	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 11: PGT Admission: Number of applications, offers and acceptances by gender; "App" for the number of applications, "Off" for the number of offers, "Acc" for the number of acceptances



Figure 10: PGT Admission: Number of applications, offers and acceptances by gender

Actions:

• Action 2.4: Contact individual PG applicants that have been offered a place to understand their needs and concerns, making students feel more welcomed, especially for females.

PGT degree completion rates by gender

Table 12 and Figure 11 show PGT results by year. There is no significant difference between male and female completion rates. However we observe quite a few withdrawals and failures, all but one of which are males. To understand this significant unsuccessful number we will benchmark the data with similar Mathematics departments as well as HESA standard (Action 3.2), and review the unsuccessful cases to dig into the reasons (Action 3.3). Part-time students all completed their degrees successfully.

							Full	-time						Part-time
		2(2013/14 2014/15							2015/16 2016/17				
	-	Suc	WD	Fail	Suc	WD	Fail	Suc	WD	Fail	Suc	WD	Fail	Suc
Female	Count	10	0	0	9	1	0	10	0	0	9	0	0	0
	%	100%	0%	0%	90%	10%	0%	100%	0%	0%	100%	0%	0%	0%
Male	Count	11	0	0	11	2	1	23	2	1	3	1	0	1
	%	100%	0%	0%	79%	14%	7%	88%	8%	4%	75%	25%	0%	100%

Table 12: PGT Degree Completion rates: Number of Successful ("Suc"), Withdrawn ("WD") and Failedstudents by gender



Figure 11: PGT Degree Completion rates (full time)

Actions:

- Action 3.2: Monitor and interpret PGT degree result data annually. Benchmark the PGT result data with similar Mathematics departments as well as HESA standard to identify trends.
- **Action 3.3:** Review the unsuccessful PGT cases to understand the reason for high failure/withdrawal rates observed in male PGT study.

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

Number of PGR students

As shown in Table 13 and Figure 12, more males than females undertake full-time PGR courses in DMS. The ratio of female full-time postgraduate research students are fairly stable over the last three years at around 40% and is higher than the benchmark (Table 14) and the national standard (Table 15). For part-time students, we have a higher proportion of females than males (the size of part-time cohorts is much smaller, however).

			Full-	time		Part-time						
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17			
Female	Count	12	14	14	15	4	4	3	1			
	%	40%	38.90%	42.40%	44.1%	66.70%	66.70%	75%	50.0%			
Male	Count	18	22	19	19	2	2	1	1			
	%	60%	61.10%	57.60%	55.9%	33.30%	33.30%	25%	50.0%			
Grand	Count	30	36	33	34	6	6	4	2			
Total	%	100%	100%	100%	100%	100%	100%	100%	100%			

Table 13: DMS PGR Data: Number of Full-time and Part-time students by gender

			Full-	time		Part-time					
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17		
Female	%	33.00%	33.10%	32.20%	26.32%	9.10%	14.30%	50.00%	0.00%		
Male	%	67.00%	66.90%	67.80%	73.68%	90.90%	85.70%	50.00%	100.00%		
Grand Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		

Table 14: Benchmarking PGR Data: Number of Full-time and Part-time students by gender



Figure 12: Comparison of full-time and part-time PGR students' data

Table 15: PGR Whole Sector Data: Nur	mher of Full-time and	d Part-time students	hv aender
Tuble 15. FOR Whole Sector Duta. Nul	nder of run-time und	i runt-time students	by genuer

			Full-	time		Part-time					
		2013/14	2014/15	2015/16	2016/17	2013/14	2014/15	2015/16	2016/17		
Female	%	27.60%	26.50%	26.30%	26.66%	19.70%	22.40%	22.70%	22.73%		
Male	%	72.40%	73.50%	73.70%	73.34%	80.30%	77.60%	77.30%	77.27%		
Grand Total	%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		

PGR applications, offers and acceptances

As shown in Table 16 and Figure 13, the total number of applications for PGR courses decreased from 2013 to 2017. This was a consequence of the Departmental Review which concluded that the Department was supervising too many research students and that it should supervise fewer, stronger research students. The proportion of offers made to female students fluctuated over the period but was broadly in line with the proportion of female applicants.

		2013/14			2014/15			2015/16			2016/17		
		Арр	Off	Acc	Арр	Off	Acc	Арр	Off	Acc	Арр	Off	Acc
Female	Count	40	29	6	20	12	2	16	7	3	17	8	2
	%	38.5%	42.0%	35.3%	32.3%	41.4%	40.0%	40.0%	35.0%	33.3%	30.4%	40.0%	40%
Male	Count	64	40	11	42	17	3	24	13	6	39	12	3
	%	61.5%	58.0%	64.7%	67.7%	58.6%	60.0%	60.0%	65.0%	66.7%	69.6%	60.0%	60.0%
Grand	Count	104	69	17	62	29	5	40	20	9	56	20	5
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	%	0%	0%	0%	0%	0%	0%	100.0 %	0%	0%	100.0 %	0%	0%

Table 16: PGR applications, offers and acceptances by gender; "App" for the number of applications,"Off" for the number of offers, "Acc" for the number of acceptances

In comparison with UG and PGT study, applying for a research degree involves significant amount of communications between the student and the supervisor. To receive an offer the student has to participate in an interview, normally via video conference, with at least two academics. This takes significant effort on both sides and is used as an effective way to improve conversion rates. As most academics in the Department are male, the interviews are often conducted by two males. We have decided to introduce a requirement that at least one interviewer is female in the case of female applicants (Action 2.5). The female interviewer could be a member of Professional Services team, so this should not lead to a significantly increased workload for our female academics. This strategy may put female applicants (who are often from strong patriarchal backgrounds) at ease.





Actions:

• Action 2.5: Ensure that at least one interviewer is female in the case of female PGR applicants. Involve female staff from administration team in interview panels, so as to reduce workload for our female academics.

PGR degree completion rates

Table 17 and Figure 14 summarise PGR results which show a gender imbalance. Over the past four years, many failures and withdrawals are seen in the PGR study which appears in both female and male students. To analyse the reason, we will review the unsuccessful cases to understand the threshold and feedback on the Departmental practice (Action 3.4). We will also encourage supervisors to undertake online training on PhD supervision, to help to identify progression issues earlier and aid completion rates (Action 3.5).

					Full-tir	ne		Part-time				
		2013	/14	2014	/15	2015/16		2015/16 2016/17 2014/15		2015/16		
		Suc	Fail	Suc	Fail	Suc	WD	Suc	WD	Suc	Suc WD F	
Female	Count	2	1	1	1	2	0	1	1	1	1	2
	%	67%	33%	50%	50%	100%	0%	100%	100%	50%	50%	67%
Male	Count	2	0	5	0	3	1	3	1	0	0	2
	%	100%	0%	100%	0%	75%	25%	100%	100%	0%	0%	100%

 Table 17: Completion of PGR students by gender; "Suc" for Successful, "WD" for Withdraw

We are concerned by the PGR failures and withdrawals, so this year we have been working very closely with Course Representatives to try to nurture a research community in Mathematics for the PGR students. Monthly seminars are held where PGR students take turns to give short talks on their area of research. Students are then encouraged to network and use the opportunity to ask the Course Representatives questions related to their studies. We hope by facilitating such discussions and socialising, students will seek support and guidance from peers and know when it is appropriate to get further help/advice. A sense of belonging and inclusion, a necessary goal in itself, may help to improve chances of completion (**Actions 3.6, 3.7**).



Actions:

- Action 3.4: Investigate the reason for high failure rates observed in PGR study. Review the unsuccessful cases to understand the threshold and feedback on the Departmental practice.
- **Action 3.5:** All supervisors to undertake online training on PhD supervision and refresh every 3 years, to help to identify progression issues earlier and aid completion rates.
- Action 3.6: Review and encourage students to use Proficio funding to attend relevant courses during half-yearly supervisory board meetings. Emails sent to increase awareness of fund and courses. Monitor if there is a gender bias in those not making use of these funds.
- Action 3.7: Encourage PhD students and postdocs to attend networking events at departmental, University and national level and provide funding (from DMS Equality budget) and promote information on sources of external funding information.

(v) Progression pipeline between undergraduate and postgraduate student levels

Table 18: Progression pipeline between UG and PGT courses; "Other" shows the number of PGTstudents that have come in from an UG degree obtained in another university

		2013/14		2014/15		2015/16		2016/17	
		Essex	Other	Essex	Other	Essex	Other	Essex	Other
Female	Count	0	9	3	8	3	7	3	3
	%	0%	45%	25%	33%	50%	54%	75%	18.7%
Male	Count	1	11	9	16	3	6	1	13
	%	100%	55%	75%	67%	50%	46%	25%	81.3%
Grand Total	Count	1	20	12	24	6	13	4	16
	%	100%	100%	100%	100%	100%	100%	100%	100%

Figure 15: Progression pipeline between UG and PGT courses



Table 18-19 and Figure 15-16 demonstrate that very small numbers of students decide to study in the Department after completing an Undergraduate degree at Essex. One of the reasons for this is that many of our modules are dual level, meaning that optionality at PGT level is severely reduced for them. However, with the current staffing levels we are unable to offer PG-only modules. As a result of engaging in Athena SWAN we have recently decided to run certain dual level modules in alternate years, so that UG students can take both modules in year 2&3, while PGT students have a greater opportunity to study on different modules here (**Action 2.6**).

Table 19: Progression pipeline between UG/PGT and PGR courses; "Other" shows the number of PGRstudents that have come in from an UG/PGT degree obtained in another university

		2013/14		2014/15		2015/16		2016/17	
		Essex	Other	Essex	Other	Essex	Other	Essex	Other
Female	Count	0	16	0	18	0	17	0	1
	%	0%	47%	0%	44%	0%	46%	0%	25%
Male	Count	2	18	1	23	0	20	0	3
	%	100%	53%	100%	56%	0%	54%	0%	75%
Grand Total	Count	2	34	1	41	0	37	0	4
	%	100%	100%	100%	100%	0%	100%	0%	100%



Figure 16: Progression pipeline between UG/PGT and PGR courses

We also run compulsory Capstone (3^{rd} year) projects, thereby preparing students for PGR study (Action 3.8).

Actions:

- Action 2.6: Run certain dual level modules in alternate years, so that students have a greater opportunity to study at PGT level at Essex.
- Action 3.8: Use the 3rd year Capstone projects to increase UG students' awareness of PGT/PGR degrees and equip them with research skills in preparation for further study.

4.2. Academic and research staff data

(i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

Table 20 summarises the DMS academic staff numbers (headcount) by grade and contract function. Those on ASR contracts are Research Officers, all of whom are male. Those on ASE contracts are primarily part-time lecturers (across both Lecturer and Senior lecturer level). With the exception of two male Senior Lecturers, all full-time academic staff are on an ASER contract. Currently there are only two female lecturers which represent 9% of all academic staff.

		Research Officer (UEG07/08)	Lecturer (UEG09)		Senior Lecturer (UEG10)		Reader/Professor (UEG11)	
		ASR	ASER	ASE	ASER	ASE	ASER	
	female	0	2	0	0	0	0	
2013/14	male	2	3	3	6	3	2	
	female%	0.00%				11.80%	0.00%	
HESA benchmark	female%	22.80%		22.90%			8.50%	
	female	0	2	0	0	0	0	
2014/15	male	1	3	3	5	3	4	
	female%	0.00%	12.50%				0.00%	
HESA benchmark	female%	22.90%			:	23.40%	8.50%	
	female	0	2	0	0	0	0	
2015/16	male	1	4	3	6	2	4	
	female%	0.00%				11.80%	0.00%	
	female	0	2	0	0	0	0	
2016/17	male	1	3	3	5	2	6	
	female%	0.00%				13.33%	0.00%	

Table 20: Breakdown of staff numbers by gender, grade and contract function

Comparing to the HESA academic staff data in mathematics (Table 20), women are underrepresented in DMS in each of the past three years, especially at Senior Lecturer and Professor levels. From 2000-2013, the academic staff in the department were almost exclusively male with under ten academics (with one female academic staff member in 2005/06 and 2006/07). Since 2013, eight new posts have been created to strengthen the existing groups and to introduce expertise in Applied Mathematics and Actuarial Science. Two full-time female lecturers, were recruited in 2013. This correlates with a focus on Data Sciences and Actuarial Science (33% are females according to the IFOA report 2016) within the Department (**Action 4.2**).

Actions:

- **Action 4.2:** Continue developing Actuarial Sciences degrees. With the increased number of students new posts in this field might be possible.
- (iii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender

		Research Officer (UEG07/08)	Lecturer (UEG09)		Senior Lecturer (UEG10)		Reader / Professor (UEG11)
		Fixed-term	Fixed- term	Open- ended	Fixed-term	Open-ended	Open-ended
2013/14	female	0	0	2	0	0	0
	male	2	3	3	1	8	2
	female%	0%				11.80%	0.00%
HESA	female%	22.80%				22.90%	8.50%
2014/15	female	0	0	2	0	0	0
	male	1	3	3	1	7	4
	female%	0%				12.50%	0.00%
HESA	female%	22.90%				23.40%	8.50%
2015/16	female	0	0	2	0	0	0
	male	1	3	3	0	9	4
	female%	0%				11.80%	0.00%
2016/17	female	0	0	2	0	0	0
	male	1	3	3	0	7	6
	female%	0%				13.33%	0.00%

Table 21: Breakdown of staff numbers by gender, grade and contract type

As shown in Table 21, all DMS ASER staff are under permanent (open-ended) contracts. ASE staff split between fixed-term and permanent contracts where the former are primarily for part-time (senior) lecturers appointed to cover the deficiency of full-time academics due to fluctuations in UG/PG recruitment or to provide covers for full-time academics on leave. The only fixed-term Senior Lecturer, who served as a module cover in year 2013/14 and 2014/15, is a former full-time academic who retired from DMS. 2/4 part-time lecturers worked longer than four years with us. Their personal preferences have been to choose to remain on fixed term contracts, rather than converting to permanent positions. So far no one has applied to switch to a permanent contract. The department will introduce appraisals for fixed-term academic staff to keep staff informed about the University regulations of continuity employment, permanency/redeployment and help them to develop their career successfully (**Action 5.2**). Given the small number of academic and research staff it has not been possible to conduct any meaningful analysis of the intersection of gender with ethnicity.

The majority of researchers in DMS are also male. All research-only contracts are fixed-term, which corresponds to Research Officers on grades UEG07 and UEG08. UEG08 Postdoctoral Research Officers are all recruited under fixed-term funded projects such as KTP. Nearly all of them have found positions with industrial partners and other academic institutions at the end of the contract. Note that female researchers were employed in DMS outside the discussed period. Currently (2017/18) the department employs one female and two male Research Officers.

Actions:

• Action 5.2: Introduce appraisals for fixed-term academic staff/post-doctoral researchers. Keep staff informed about the University regulations of continuity employment, permanency and redeployment.

(iii)	Academic I	eavers by	grade	and gen	der and	full/par	t-time status
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		Research Officer Lecturer S		Senior Lecturer		
		(UEG07/08)	(UEG09)	(UEG10)		
		Fixed-term	Fixed-term	Fixed-term	Open-ended	
	female	0	0	0	0	
2013/14	male	2	0	0	0.8 (FTE)	
	female	0	0	0	0	
2014/15	male	0	1	1	0	
	female	0	0	0	0	
2015/16	malo	1	0	0	0	
	Indie	1	0	0	0	
2010/17	female	0	0	0	0	
2016/17	male	0	0	0	0	

Table 22: Breakdown of academic leavers by gender, grade and contract type

As shown in Table 22, only one staff member on a permanent contract left their position. This staff member, a Senior Lecturer, retired in 2013 and was then appointed as a part-time lecturer in

2013/14 and 2014/15. One male Senior Lecturer was appointed as the Faculty's Deputy Dean of Education in 2013/14 and continues to work under a 20% contract with the DMS, which is recorded as a 0.8 (FTE) leaver in Table 22. Other leavers (all males) are all graduate/postgraduate researchers under fixed-term contracts. The data was collected from the central HR record, from which individual leavers were then identified. All numbers in Table 22 are headcounts apart from the 0.8 in year 2013/14.

Words: 1976

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

Recommended word count: Bronze: 6000 words | Silver: 6500 words

5.1. Key career transition points: academic staff

(i) Recruitment

Table 23 shows the data for applications, shortlists and appointments. Our shortlisting and hiring ratio of male and female applicants is broadly consistent with the ratio of male and female applicants in total. We are somewhat disappointed to see that many more male applicants apply for our jobs than female applicants. This imbalance is more severe than the proportion of female population in Mathematics academic positions in the UK (according to HESA benchmark for Mathematics, around 23% of Lecturer/Senior Lecturer and 8.5% Professors are females).

		Applications			Shor	Appointments		
Year	Grade	Female	Male	Unknown	Female	Male	Female	Male
2013/14	Senior Lecturer (UEG10)	2	11	0	0	3	0	1
2014/15	Lecturer (UEG09)	12	69	0	1	5	0	3
2015/16	Lecturer (UEG09)	2	7	1	Not available	Not available	0	1

Table 23: Applications and appointments to positions in Mathematics

To attract more female candidates, the Department has introduced an Equality and Inclusive in Mathematical Science webpage (EIMS), with the aim of explaining our commitment to women in mathematics and to highlight the role women play in Mathematics at Essex (Action 4.1). This will be referred to in the advertising of roles. In order to make the advertisement more visible to potential female candidates, our Faculty has also registered for the WISE membership which provides an additional route to targeting our job adverts to females (Action 4.3).



The Department has also signed up as a supporter of the London Mathematical Society's (LMS) Good Practice Scheme (GPS) in June 2017, from which we continuously learn good practices in recruitment and supporting women's career (**Action 4.4**). Further particulars of DMS job adverts will include details of the childcare provision and voucher scheme. In the future we hope to be able to place the Departmental AS Bronze Award badge on our website and job adverts (**Action 4.5**).

All staff sitting on panels or involved in recruitment decisions are required by the University to have completed online training in Recruitment and in Equality and Diversity. Further, all recruitment panels are required to have a gender mix (female staff from other departments from the Faculty are involved to prevent overloading DMS female staff members). The University has introduced mandatory Unconscious Bias training. As shown in Figure 17, the Staff Survey indicates that 18/20 had undertaken training in Equality and Diversity. This contrasts with the situation for training in Understanding Unconscious Bias where 15/20 had undertaken it (Action 4.6).

Actions:

- **Action 4.1:** Make use of the EIMS webpage to attract more female applicants. Keep it updated with the newest information on promotion, training, and flexible working policies.
- Action 4.3: Advertise academic/research jobs through LMS/WISE.
- Action 4.4: Actively participate in Athena SWAN events to learn from what other departments do in terms of attracting more female applicants. Share good practice in recruitment.
- Action 4.5: Gain Athena SWAN Bronze award. Make this prominent on the Department webpage and job adverts together with our commitment to the LMS GPS.
- Action 4.6: Ensure training in Unconscious Bias and Equality and Diversity to be completed by all DMS staff. Circulate up to date information on Equality/Diversity and Unconscious Bias to interview and shortlisting panel members at the time of recruitment for new positions.

(ii) Induction

There are university-wide induction events provided to all new staff, covering Introduction to the University, Equality and Diversity, Health and Safety, facilities, IT, grants, funding and HR issues such as maternity, paternity and parental leave. New members of staff are required to attend an induction welcome event, and these are available throughout the year. Equality networks, such as the Essex Women's Network, Parents Network, LGBT+ Allies are brought to attention during the induction. Established staff also need to be kept up to date on latest policies so we encourage all staff to access this information from the Human Resources webpage through appraisal (Action 5.3).

A departmental induction is provided by the HoD on the first day of recruitment. Each new member of staff has a probationary supervisor during their probationary period; this is a more experienced member of staff responsible for helping the new member of staff to start work successfully. In the first meeting of new staff and the probationary supervisor, a probationary agreement is drawn up (which is then approved by HoD) to establish clear criteria that should be met for passing the probation period. Both female members of our department, as recently appointed staff, reported that their probationary supervisors have helped them with establishing their role in the department and successfully passing their probation. Nevertheless, it is felt by some that the current system is isolated from appraisal and workload allocation, as the latter two are directly managed by the HoD (Action 5.4).

Actions:

- **Action 5.3:** Make induction information available to all staff (not just probationary staff). Encourage all staff to access this information from the Human Resources webpage through appraisal.
- Action 5.4: Make the mentoring process more closely linked with appraisal (invite mentor to attend appraisal/PDR meetings of mentee). Ensure personal development needs are discussed in line with the permanency and promotion criteria and feedback to workload allocation.

(iii) Promotion

Criteria for promotion and probation are explicitly stated in the relevant University documents. The number of Applicants and Awards of promotions and permanency in the DMS in the past three years are summarised in Table 24 (promotion) and Table 25 (permanency). The DMS has had six promotion applications from 2013 to 2017, all from males and successful. Our data for promotion is heavily skewed by the fact that the only two female academic members are at a relatively early stage in their career. To encourage females to apply and to provide support, we will organize formal/informal events to encourage communications amongst staff at all career stages to share experiences and nominate qualified females for leadership training programmes (Action 5.5, 5.6).

		Applicati	ions	Promotio	ons
Year	Grade	Fomalo	Malo	Fomalo	Malo
		remale	IVIAIE	Feiliale	IVIAIE
2013/14	None	N/A	N/A	N/A	N/A
2014/15	Senior Lecturer to Professor	0	2	0	2
,	Lecturer to Senior lecturer	0	1	0	1
		0	-	0	-
2015/16	Lecturer to Senior lecturer	0	1	0	1
2016/17	Senior Lecturer to Reader	0	2	0	2

Table 24: Applications for promotions within the DMS

 Table 25: Applications for permanency within the DMS

	Applica	ations	Awarded		
	Female	Male	Female	Male	
2013/14	0	0	0	0	
2014/15	0	1	0	1	
2015/16	1	1	1	1	
2016/17	1	0	1	0	

Both female staff appointed in the last 4 years have passed their probationary period and are now permanent. The department designed and implemented plans of helping them in a number of ways,

Now both females work successfully in their teaching and research, both holding significant leadership roles in the department.

Figure 18: Staff survey result on question: "I understand the promotion/probation process and criteria"



Figure 18 shows that over 88% academic staff understand promotion/probation criteria and Figure 19 shows that over 88% academic staff believe that both genders are treated fairly in promotion/probation. We understand that there is a potential issue in that those who disagree could be the female staff members. However since we only have two females in DMS, breaking the data down by gender will break anonymity of the survey. The aspired increase in the number of female staff members would reduce this issue, however.

Figure 19: Staff survey result on question: "In the DMS, staff are treated on their merits irrespective of their gender (e.g. both women and men are actively encouraged to apply for promotion and take up training opportunities)"



The DMS uses the University's probation agreement to make explicit what is required. However, some probations staff members still felt that they would benefit from specific recommendations from their probationary supervisor about what in required, and that such recommendations are made as early as possible. Some staff felt that they would benefit from additional guidance in preparing a successful application (Action 5.7). As to promotion, the HoD uses appraisal meetings to recommend applying for promotion (even in borderline cases), and then feedback is generated by a meeting of the senior staff of the department and communicated back to the applicants; we feel that this is a good practice that works well.

Figures 20 shows academic staff members' responses about whether they are encouraged to apply for promotion. 72% gave positive answers to this question but 2/18 selected "strongly disagree". We will make better use of the appraisal scheme to encourage staff to apply for promotion (**Action 5.8**).



Figure 20: Staff survey result on question: "I receive support and encouragement from my department to apply for promotion or internal jobs"

Actions:

- **Action 5.5:** Organize formal/informal events to encourage communications with staff at all career stages to share experiences in career development.
- **Action 5.6:** Support/Encourage qualified female staff on leadership training courses, e.g. Aurora, *Future Leadership programme.*
- **Action 5.7:** Consider publishing successful probation/promotion applications to members of the department, on agreement with the selected successful applicant.
- Action 5.8: Ensure the mentoring system and Appraiser process work effectively in supporting permanency and promotion applications. Through the PDR process guidance will be given to staff about when they may be well placed to apply for promotion, having previously been discussed at the Research and Education committees.

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

For REF2014, were submitted under Computer Science and Informatics and was submitted under Business and Management Studies. The remaining ASER staff

were not entered into REF2014 as their research did not align with submissions by the University. For RAE2008, when there were no female staff members in the DMS, three staff members were submitted under Biological Sciences, and two were submitted under Computer Science and Informatics.

We plan to submit every ASER member of staff to the Mathematical Sciences Unit of Assessment of REF2021. In preparation for this, the University held an internal Interim REF assessment, with a deadline of 1/7/16. A reduction of the number of items required, or an extension to the deadline was permitted for staff with individual circumstances such as career breaks, maternity, paternity or adoption leave, ill health or injury. All ASER staff in DMS were assessed by the University to have met this Interim requirement. The department provides support to all individuals to support their contribution to REF, such as granting early periods of research leave (Action 5.9). Both the University and the department strongly encourage staff to promote their work via creating accounts on Google

Scholar, ResearchGate etc. Since not all staff are taking advantage of these opportunities we will further encourage all members of staff to promote their research online (*Action 5.10*).

Actions:

- Action 5.9: Continue monitoring research publications of female staff and support them to work towards successful REF 2021 submission.
- Action 5.10: Ensure that all members of staff are aware of ways of promoting their research online.

5.3. Career development: academic staff

(i) Training

Information about training and opportunities are circulated within the department by the staff member holding the relevant admin role. For example, information on training in writing grant applications, impact acceleration and funding opportunities are circulated by the Director of Research (DoR); information on training relevant to supervision, tutoring and CADENZA are circulated by the Director of Education (DoE) and Postgraduate Director. The HoD takes overall responsibility of reviewing everyone's career development needs and discusses development opportunities during PDR meetings.

As part of probationary agreements, staff members are required to apply for HEA fellowship via CADENZA. This is the University's professional development framework for those teaching and supporting learning in higher education. Of the Department's 18 full-time staff there is one Principal Fellow, three Senior Fellows and seven Fellows. Both our female staff members are Fellows of the HEA.



Figure 21: Staff survey result on question: "In the past 2 years, have you contributed at a national or international conference"

Each year every academic staff member has an allocation of £1200 from the departmental operating budget, to be spent on conferences and professional development. Staff who have caring responsibilities can also apply for the University's Carer Development Fund of £150 to cover the additional caring cost incurred by attending conferences/events. Figure 21 of the Staff Survey indicates that 14/16 (2/2 females) contributed at a national or international conference in the past 2 years.

Additional training for PhD students is provided through various modules of the Proficio doctoral training system. Every PhD student has £1000 allocated by the department to spend over three years to cover training costs and conference attendance. Nevertheless this fund can only be used on the expenses directly incurred by themselves rather than for covering the caring expenses due to

attending conferences. A possible action is therefore to establish a fund at department level (from the Equality Budget) to support PhD students with additional caring costs (**Action 3.9**).

Actions:

• Action 3.9: To establish a fund at the department level to support PhD students to help with additional caring costs incurred as a result of attending conferences, training or networking events. (In addition to the University budget for staff members.)

(ii) Appraisal/development review

DMS operates an annual appraisal process resulting in the completion of the Appraisal and PDR. For academic staff this is carried out by the HoD; for postdocs this is carried out by the Project Leader. During this process, the significant achievements of the past year are discussed and it is considered if the previous objectives have been met and new SMART objectives are set. Furthermore, a review of training and development activities since last appraisal meeting is carried out. The areas of teaching, research and administration are covered during the appraisal. The forward-looking aspects of the appraisal include identifying training needs, discussions on career aspirations and plans to apply for promotion. A subgroup of the institutional SAT is currently working with the Organisational Development Team to review the PDR provision in order to separate performance evaluation from personal development discussions.

Figure 22 provides the data on the uptake of appraisal in DMS. Note that the participants of this survey include both academics and professional support staff. Detailed inspection of the survey results show that 17/18 academic staff who responded to this survey confirmed they have had appraisals in the past 12 months.



Figure 22: Staff survey result on question: "I have had an appraisal in the last year"

Figure 23 and 24 show staff opinion about whether their career progression and workload are usefully discussed in appraisal. Although over 70% of staff gave positive answers to these questions, 1/20 responded negatively. To address this we will ensure all new appraisers attend the University's Appraiser Training (Action 5.11) and suggest a tick box agenda for appraisal meetings to make sure no important discussions are missed (Action 5.12).

Figure 23: Staff survey result on question: "My career progression is always usefully discussed in my appraisal"



Figure 24: Staff survey result on question: "My workload is always usefully discussed in my appraisal"



In addition to the annual Appraisal, probationary staff members also meet with their probationary supervisor annually. This provides the probationary staff member with opportunities to discuss and reflect on what has been done, to understand the permanency criteria and to set up plans for the probationary period.

The Faculty of Science and Health runs termly Academic Research Seminars across the faculty to encourage collaborations across discipline, which provides staff with networking opportunities across departments. All DMS staff are encouraged to attend and give 2-minute talks about their research.

Figure 25 shows results on staff survey question about whether DMS provide staff with useful probationary supervising (mentoring), networking and leadership opportunities. It seems that quite a few people are concerned or neutral about these three aspects. We will carry out a further DMS staff survey to understand people's opinion on what is treated as useful probationary supervising, networking and management opportunities and how DMS can help with this (Action 5.13).

Figure 25: Staff survey result on question: "The Department of Mathematical Sciences provides me with"



When asked about holding disproportionate responsibilities, 4/6 of those who responded expressed concern about administration duties (see Figure 26). This might be due to the fact that in 2017 we recruited 50% more UG students than before. The planned increase in staff numbers is expected to alleviate this issue (Action 5.14).

Figure 26: Staff survey result on question: "Do you feel you are given disproportionate responsibilities for any of the following"



Actions:

- Action 5.11: Ensure all new appraisers attend the University's Appraiser training.
- Action 5.12: Suggest a tick box agenda for appraisal meetings to make sure no important discussions are missed.
- Action 5.13: Carry out a further DMS staff survey to understand people's opinion on what is treated as useful mentoring, networking and management.

- Action 5.14: HoD to submit application to University for new academic staff based on increased student numbers.
- (iii) Support given to academic staff for career progression

In the past staff put themselves forward as applicants for promotion. The department is aware that this approach may favour staff from particular backgrounds, and so senior staff such as DoE, DoR and the HoD should be proactive in suggesting to staff when they may be well placed to apply for promotion (**Action 5.8**).

When applying for promotion, ASER staff need to present a case for promotion under each of the headings Research, Education, Leadership/Citizenship; ASE staff need to address each of Scholarship/ professional practice, Education, Leadership/Citizenship; and ASR staff need to address each of Research, Leadership/ citizenship, and Education (where appropriate). Therefore a range of skills are taken into account when applying for promotion.

It appears that the department is not viewed favourably in terms of valuing the full range of an individual's skill and experience (Figure 27). In order to understand this we will run workshop sessions by recently promoted staff to share experience and to open general discussions (**Action 5.15**). These sessions will also be aimed at postdoc researchers and temporary teaching staff to share experiences of academic career progression.



Figure 27: Staff survey result on question: "When considering promotions, the Department of Mathematical Sciences values the full range of an individual's skills and experience"

Actions:

- Action 5.8: Ensure the mentoring system and Appraiser process work effectively in supporting permanency and promotion applications. Through the PDR process guidance will be given to staff about when they may be well placed to apply for promotion, having previously been discussed at the Research and Education committees.
- Action 5.15: Organize workshop sessions run by recently promoted staff to discuss experience of promotion procedure with other staff.

(iv) Support given to students (at any level) for academic career progression

Advice and support are offered to students at the University in many ways. Each undergraduate student has a Personal Tutor who remains with them throughout the duration of their degree.

Students meet regularly (at least termly) with their tutor to discuss their studies and any issues they may have. Tutors have access to information regarding their tutee's academic performance in order to have an integrated picture and to better support their development. All students are entitled to request a change of tutor and, in particular, female students may request a female Personal Tutor. In addition (the 100% female) Professional Services team are available to students to discuss personal issues. The department also runs a formal peer mentor scheme where a new student (the mentee) meets with a more experienced student (the mentor) to help the new student settle in and make them more aware of ways they can get involved and make the most of their university experience.

Furthermore, the DMS has been one of the pioneers in Mathematics Support not only of the DMS students but also of students of other departments. Undergraduate students are eligible to apply to the UoE UROP (Undergraduate Research Opportunities Programme) scheme, which provides a paid bursary to students undertaking placements working with staff on research projects. The UROP placements are advertised on the UROP web page and circulated by email to all students. Study Abroad and Industrial Placement schemes are integrated into the UG program and supported by departmental officers, and they will be promoted in EIMS and monitored for participation by gender (Action 3.10).

In DMS, we have both an Employability Development Director (EDD) and a Placement Year Officer (PYO) working directly with our students. We also introduced a zero-credit, compulsory module MA199 Employability which runs over three years which equips our students with essential employability skills (Figure 28). The students benefit from our MA199 seminars (3:2 female:male ratio for external speakers), one-day workshops and career events, which provide career guidance and advice on continuing to further study. Furthermore, they receive guidance on job applications, and preparation for interviews from their personal tutor. In line with the principals of Athena SWAN, the department will introduce one MA199 seminar in 2018/19 on Equality and Diversity (Action 3.11).

The effort we made has resulted in excellent employability figures for our students. The 2016/17 DLHE data reports that 100% of our female graduates entered graduate level work/study within 6 months of their Undergraduate course, in comparison to 76% of males. This brought the DMS to 4th position in the 2017 Guardian University Guide for "Career after 6 months" amongst UK mathematics departments.



For post-graduate students, a two-hour induction meeting takes place at the beginning of every academic year. The department offers a research methods module that provides an introduction to

the principal research tools for students on postgraduate courses in Mathematical Sciences, including practice in the mathematical word-processing language LaTeX. All post-graduate students have access to the student services. All post-graduate students are also invited to departmental seminars and are encouraged to give talks. For their career development, we will also encourage GTAs and PhD students to obtain Associate Fellowship of the HEA Certificate by undertaking CADENZA training (Action 3.12), and require GTAs to obtain this within one year of starting employment as a GTA. (In 2017/18 of the 10 GTAs employed by DMS, 7 were female, 3 were male; one female GTA and one male GTA held AFHEA status while others were preparing applications.)

Actions:

- **Action 3.10**: Promote the Study Abroad and Industrial Placement schemes on EIMS. Monitor the participant data and detect if there are any gender issues that need to be addressed.
- Action 3.11: Introduce one MA199 seminar in 2018/19 on Equality and Diversity.
- Action 3.12: Encourage GTAs and PhD students to undertake CADENZA to obtain the HEA Associate Fellowship.

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

Advice and guidance on research funding applications comes from two main sources: staff have an annual research meeting with the HoD and DoR where future plans, including funding, are discussed.

		Appli	cations		Successful Applications			
Year	No. of ap	plications	fEC project value (£)		No. of applications		fEC project value (£)	
	Male	Female	Male	Female	Male	Female	Male	Female
2013/14	15	0	1,948,730	0	5	0	233,973	0
2014/15	11	1	3,718,691	2,198	2	1	12,192	2,198
2015/16	9	0	1,808,030	0	2	0	263,534	0
2016/17	10	1		Not available	2	0	N	ot available

Table 26: Research Grant Applications by year and gender within the DMS

The Research Grant Applications data in DMS in past four years are summarised in Table 26. Note that comparable fEC data is not available for 2016/17. As to be expected for a department with only two female staff members, the majority of these applications were made by male staff, especially the large ones. The department needs to ensure that female staff are provided with the support they need to make successful grant applications. Possible ways include increasing opportunities for junior staff to be named as CI on research grant applications (**Action 5.16**) and facilitating advice and feedback by senior staff (**Action 5.17**).

The department has an internal peer review procedure whereby grant proposals are submitted to the DoR who assigns staff members to read and provide feedback on the application. Applications are handled by the University's Research and Enterprise Office (REO). Their staff work with the applicant in preparing the costings and provide guidance and advice on the general presentation and pitch of the application. A bank of successful funding applications is also maintained by REO for reference. The Faculty's Research Impact Officer provides expertise in preparing Impact statements and works

with academics to develop these sections. Most academics (12/16) agree that the DMS encourages and supports their grant applications (Figure 29).



Figure 29: Staff survey result on question: "I was encouraged to apply for research grants and received useful support from the department"

Actions:

- Action 5.16: Making use of Research Away Day to review successful grant applications and encourage joint grant applications. Increase opportunities for junior staff to be named as CI on research grant applications.
- Action 5.17: Facilitate advice and feedback by senior staff, both through formal mentoring and informal research networks.

5.5. Flexible working and managing career breaks

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

Before staff go on maternity or adoption leave, they are invited to attend a meeting with HR to talk about their plans/benefits/entitlements and to enable the University to support them. The HoD receives a summary of what was discussed.

(Action 6.1).

A Maternity Risk Assessment is carried out and staff are entitled to paid time off work for antenatal appointments. Sick leave requests have been fully understood and approved promptly for pregnant staff members.

Actions:

• Action 6.1: Ensure better departmental communication of information regarding leave allowances and management, as well as liaison between the member of staff, the Department, and HR.

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

Central University guidance on maternity leave is provided for staff and managers. Keeping In Touch (KIT) days (up to 10 days) allow staff to do some limited work under the terms of their contract whilst they are on maternity leave. Any KIT day taken will not bring the maternity leave period to an end, and payment of SMP/OMP will not be affected. Academic staff can use KIT days to attend conferences, the costs of which are covered by the Department. If in accordance with the contract of employment the member of staff is due to receive an annual increment on their pay scale, they will still receive this. Annual leave accrues throughout the full period of maternity leave. Leave also accrues for any statutory public holiday and/or Christmas closure day that falls during maternity leave.

Two members of staff went on maternity leave during the reporting period, both posts were covered via fixed-term maternity cover contracts. This avoided other staff having increased responsibility and workload. One staff has used KIT days to attend Departmental Staff Meetings and Applicant Days, upon her requests. Staff on maternity leave will also be notified if there is something specific for that member's role such as training opportunities/conferences, so as to help them arranging KIT days.

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

Staff returning from maternity and adoption leave are encouraged to further their professional development by attending conferences relevant to their area of research funded by their allocation from the Departmental Operating Budget and the Career Development Fund for Carers which covers the additional caring costs incurred by attending such events. The AS lead is also the DMS parent mentor and can offer support and advice on pregnancy at work, maternity/paternity/adoption leave and life as a working parent.

A member of the Professional Services staff put in a flexible working request for part-time working **with a service of the ser**

(iv) Maternity return rate

There has been a 100% maternity return rate in DMS over the reporting period. One member of the Professional Services team took a year's maternity leave, returning in June 2017 on a part-time basis following a successful flexible working request (see details in (iii) above).

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

Table 27: Mate	ernity & paternity l	eave taken by gender an	d grade (academic staff)
	, , ,	, 0	

	Lecturer (Grade 9)	Senior Lecturer (Grade 10)	Professor (Grade 11)
Male	0	2	1
Female	1	0	0

Table 27 and 28 show the number of maternity and paternity leave takers from 2013 to 2017 in DMS. Note that no male staff members have taken shared parental leave as yet. When there is a request

for maternity/paternity leave, the HoD will communicate with staff to explain their entitlement and reassure them that they are not required to reschedule their teaching and that their duties would be reassigned during their period of leave.

 Table 28: Maternity & paternity leave taken by gender and grade (Professional Services staff)

	Grade 4	Grade 5	Grade 8
Male	0	0	0
Female	0	1	0

Figure 30: Staff survey result on question: "New staff are informed of the University's family friendly policies (e.g. flexible working, maternity/paternity leave) during the induction process"



University policies regarding family leave were updated in 2016 and are more comprehensive than previously. In the recent Staff Survey, nearly half (9/20) felt that the induction process covers the policies on family leave and flexible working (Figure 30), however it is worth noting here that many staff inductions took place many years ago when the policies were not so detailed or accessible, which may account for many members of staff (9/20) answering "neither agree nor disagree" (**Action 5.3**).

Figure 31: Staff survey result on question: "The DMS has made it clear to me what its policies are in relation to gender equality (e.g. on discrimination, parental leave, carer's leave, flexible working)"



Figure 31 suggests that 3 members of staff may feel uninformed about the University's policies on flexible working and parental leave. When the Department Manager is informed about central changes (for example changes to leave entitlements) either via email or attending central briefings, she will send an email round to all staff. These will also be added to the agenda for the twice-termly departmental meetings (Action 6.2), in addition to dissemination through our EIMS webpage (Action 4.1).

Actions:

- Action 5.3: Make induction information available to all staff (not just probationary staff). Encourage all staff to access this information from the Human Resources webpage through appraisal.
- Action 6.2: University policy updates are added to the agenda for the twice-termly departmental meetings.
- Action 4.1: Make use of the EIMS webpage to attract more female applicants. Keep it updated with the newest information on promotion, training, and flexible working policies.

(vi) Flexible working

Staff have a right to request to work flexibly provided they have been employed for the University for 26 weeks continuously. Although employees with fewer than 26 weeks service do not have a statutory right to request flexible working, we allow all staff to make such a request. The University will consider requests in a reasonable manner and will only refuse them if there is a business reason for doing so. In addition to the Professional Services case detailed in 5.5(iii), a member of staff at professorial level requested a later start to their working day via a flexible working request, which was supported by the Department and subsequently granted.

Staff were asked about flexible working in the recent Staff Survey (Figure 32). Again, the 8 members of staff who answered "neither agree nor disagree" are likely to be those who had never made a flexible working request or been aware of anyone that has.



Figure 32: Staff survey result on question: "My Head of Department is supportive of requests for flexible working (e.g. requests for part-time working, job share, compressed hours)"

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

The University is fully committed to helping staff balance work and personal commitments whilst ensuring compatibility with the interests of the University. Staff on a permanent contract with at least 2 years of continuous service can request an unpaid extended period away from employment to meet their personal needs. This could be to extend maternity/paternity/shared parental leave or to care for an elderly relative. The University will endeavour to facilitate a member of staff's return to the post which they occupied prior to the career break. In the event of the original post no longer being available, the University's Redeployment Policy and Procedure will apply.

During the reporting period, there were no requests from DMS staff to take a career break. This could be due to the lack of awareness of the policy (**Action 6.2**).

Actions:

• Action 6.2: University policy updates are added to the agenda for the twice-termly departmental meetings. Increase awareness of University policies around career breaks.

5.6. Organisation and culture

(i) Culture

DMS has always regarded itself as a small and friendly department. In the last decade the number of academic staff has approximately doubled. Two female academics were appointed and both have now successfully completed their probationary period. The 2017/18 academic year saw the department achieve a large increase in the number of students and this will hopefully lead to further growth in the number of academics in the near future. With this in mind it is important that our academic staff comprise a diverse mix of people and that we become a large and friendly department. It is important that we continue to have student representation at our staff meetings and that the SSLC system continues to run as effectively as before.

Additionally, as a part of the Athena SWAN application the Department will be continue to carry out Staff Surveys. This data can then be used to address any issues that arise relating to how the Athena SWAN Charter principals are embedded into the culture and workings of the department (**Action 1.3**).

<u>Actions</u>

• Action 1.3: Carry out annual Staff Survey to ensure that staff perceptions about the working environment in DMS is fully understood.

(ii) HR policies

In this section we will discuss findings from the Staff Survey. From Figure 33 we can see that no staff disagreed with the statement that in the DMS men and women are paid an equal amount for doing the same work. While the details of spinal points which staff members are at is not generally available, the career stage and job titles of individuals are widely known and so estimates of salaries

earned can be inferred. Success in promotions and permanency are announced and celebrated within the department.





Figure 34: Staff survey result on question: "The DMS makes it clear that unsupportive language and behaviour are not acceptable (e.g. condescending or intimidating language, ridicule, overly familiar behaviour, jokes/banter that stereotype women or men or focus on their appearance)"



Only 75% of respondents agree that the Department makes it clear that unsupportive language and behaviour are not acceptable (Figure 34) and 2/20 responses mentioned that they have experienced a situation(s) where they felt uncomfortable because of gender (Figure 35).

Since the survey was anonymous, it is not possible to ascertain if there is a gender bias in these data. It is important to properly understand if there is such a bias, but in a small department with a small number of female staff this can be a sensitive and personal issue to investigate. For this reason, the HoD/ DM will send general and regular reminders to all staff to inform them of the University and Department's expectation that all staff be treated with dignity and respect, that the University adopts a zero tolerance approach to harassment and bullying, and to provide details about where to seek support (**Action 7.1**). In addition, a poster advertising the services of the Network is prominently displayed within the department (**Action 7.2**).

Figure 35: Staff survey result on question: "During my time in the DMS, I have experienced a situation(s) where I have felt uncomfortable because of my gender"

Actions:

- Action 7.1: HoD/DM send general reminder to all staff asking them to seek professional advice if they have unpleasant experience because of their gender. Follow up with potential feedback and take relevant actions.
- Action 7.2: A poster advertising the services of the Network is prominently displayed within the department.

(iii) Representation of men and women on committees

Within DMS the membership of several core committees are determined by the roles that people hold. These roles are assigned annually by the Head of Department in consultation during PDR meetings with each academic about their preferences and taking into account the WAM. Through this process all members are encouraged to serve on Department committees. Main role holders by gender are summarised in Table 29.

The main committees in the Department influencing its direction are The Departmental Steering Group, The Department Education Committee and The Departmental Research Committee. Membership by gender is shown in Table 30.

The principal academic roles that have been occupied in the Department by a woman in the last three years are the Deputy Graduate Director, the Placement and Study Abroad Officers, Chair of the Athena SWAN Committee. Some roles such as Postgraduate Study Skills Officer have been assigned to women, to act as a departmental representative on University committees from 2013 to the present.

Although DMS is a small department with a small number of women, most committees have had at least one female member during the past three years. However, a significant gender imbalance is seen in key role holders (**Action 7.3**). It should be noted however that the total number of duties given for female staff is affected by the fact that in recent years one of the members of female staff

had a period of maternity leave, and one of the members of female staff has dedicated significant time to developing a new, and very successful, degree course.

	Gender
Head of Department (HoD)	Male
Department Manager (DM)	Female
Director of Education (DoE)	Male
Director of Research (DoR)	Male
Employability Development Director (EDD)	Male
Undergraduate Director	Male
Graduate Director	Male
Deputy Graduate Director	Female
Senior Exams Officer	Male

Table 29: Main role holders in the DMS in 2017/18 by genders

Table 30: Core Committee members in the DMS in 2017/18 by genders

	Female	Male
		_
Department Steering Group	1	4
Department Education Committee	1	5
Department Research Committee	1	4
Department Scholarships Committee	0	6
Department Exam Board	0	5
Research Students Progress Committee	1	5
Staff/Student Liaison Committees	1	7
Athena SWAN Committee	4	4

Actions:

• Action 7.3: Consider increasing the number of female role takers following the permanency of both female staff members. Encourage female academics to participate in committees as a part of yearly appraisal. (Where staff are members of committees this is recorded in the WAM so the HoD will reallocate other duties accordingly.)

(iv) Participation on influential external committees

Participation in some committees external to the department at Faculty level or at University level is determined by roles assigned within the Department. For example, The DMS AS lead, Dr Yang, represents DMS in University AS committee and contributed to the November 2017 institutional submission.

Membership of the University's Senate is decided in some instances by role, i.e. HoD; other members of staff may put themselves forward for nomination. In the past three years Mathematical Sciences has had two elected members (males) of Senate representing the Department. Until the last academic year neither of our female members of staff has been able to stand as both were probationary staff (Action 7.4).

Actions:

• Action 7.4: Encourage eligible female members of staff to consider standing for Senate.

(v) Workload model

The female academics in the Department are closer to the beginning of their career, and as with all recently appointed staff, the Department tries not to overload them with heavier responsibilities.

The Department has a transparent WAM which is reviewed annually. The workload is discussed during the annual appraisal. Heavier administrative duties in the Department are not rotated regularly, but usually are allocated to more experienced staff, while less experienced members of staff are exposed to various aspects of administration in the Department by participating in relevant meetings.

Although the majority of people feel that workload allocation is fair and transparent (Figure 36), it is however worrying that 30% of them disagree (**Action 7.5**).

Actions:

• Action 7.5: Continue to monitor staff satisfaction with allocation of duties. Gather people's opinion of workload allocation in annual appraisal and departmental meetings. Revise the workload model to ensure fairness and transparency.

(vi) Timing of departmental meetings and social gatherings

Historically, University meetings and departmental meeting, including seminars and Away Days have been scheduled during 10am to 5pm. Dates and times of meetings of departmental meetings and away days have always been published well in advance to maximise attendance and to allow those with family commitments to make any necessary arrangements. In our most recent staff survey there was a clear indication (Figure 37) that the majority of the staff would like meetings to take place between 10am and 4pm. With this in mind for the 2017/18 academic year we have changed the termly Departmental Meetings (1-5pm) to two shorter ones (1-3pm) and runs twice per term (Actions 7.6, 7.7).

Figure 37: Staff survey result on question: "The timing of department meetings should be within core hours of 10am – 4pm"

The main staff social gathering for the department each year is the Christmas lunch, but additionally we attend the annual staff picnic as well as arranging ad-hoc social gatherings. Figure 39 shows that all respondents thought that social activities were welcoming to both genders. Additionally we arrange welcome events for new students at the start of each academic year that include a free lunch and the chance to meet members of staff and peer mentors.

Figure 39: Staff survey result on question: "Work related social activities in the Department of Mathematical Sciences, such as staff parties, team building or networking events, are welcoming to both women and men (e.g. consider whether venues, activities and times are appropriate to both women and men)"

Actions:

- Action 7.6: Monitor times of social gatherings and meeting times (such as morning coffee sessions, departmental meetings, research seminars) and revise, if needed, to make the times convenient for staff with care duties
- Action 7.7: Review the success of holding core departmental meetings between 10am-3pm and revise if necessary.

(vii) Visibility of role models

During Applicant Days when prospective students are visiting the University we always ensure that there are both male and female interviewers and Student Ambassadors. We have recently updated the banners we have for our degree schemes; the new banners have a woman featured on the Mathematical Sciences banner. The departmental website has several videos, photos and students profiles. Table 31 summarises the breakdown visibility by genders.

		Female	Male
Videos	Staff	0	6
	Students	3	2
	Externals	1	1
Pictures	Staff	0	6
	Students	0	5
Student Profiles		4	2

Table 31: The	'named' peo	ple in the	DMS website	by genders

Every year the Department hires a number of GTAs. Both male and female PhD students are widely represented among the Department's GTAs. For example, in the academic year 2016/17 there were 9 female and 7 male GTAs and in 2017/18 there are 7 female and 3 male GTAs.

Departmental Seminars are coordinated by the seminar organiser with members of staff suggesting speakers. During 2013-2016 there have been 60 research seminars within the department, 55 of which were delivered by males and 5 by females. Driven by with Athena SWAN, the data has largely improved in 2016/17 when we had 18 external seminar speakers and 7 were females. The department has adopted an ambitious target that within four years 50% of its seminar speakers are female. The seminar organizer will encourage nominations for female speakers and prioritise accordingly (**Action 7.8**).

When staff have papers accepted for publication it is usual for them to circulate this information to all staff via email so that their success can be celebrated. Similarly when a grant application is successful that success is shared, both internally to the department as well as via social media for wider consumption.

During the summer following the last two academic years we have been successful in securing a place at the LMS Summer School for one of our best performing students about to enter their final year of study. During both years we have applied for places for both male and female students, with a female student attending in 2016 and a male student attending in 2017.

Actions:

• Action 7.8: The seminar organiser will encourage nominations for female speakers and prioritize accordingly.

(viii) Outreach activities

The Department engages in a number of Outreach Activities locally, regionally and nationally. Activities include open days, visits to schools, attending a wide variety of student recruitment events and speaking at public events promoting mathematics. The department is also very closely linked with the Further Mathematics Support Programme, currently playing host to an Area Coordinator and a Central Coordinator.

Year	number of attendees
2012/13	2444
2013/14	3201
2014/15	2735

Table 32: The total	number of	attendees in	DMS outr	each sessions
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Examples of department led outreach activities include the Sunday Mathematics Class for local KS3-4 students, the Winsten Day enrichment event for Year 12 pupils, taking part in local school careers fairs, and the organising of bespoke enrichment visits to schools. The goal of these enrichment events is to engage with students in the local area and to encourage more students into the mathematical sciences. The total number of attendees (counting both teachers and students) at these sessions is

summarised in Table 32. In 2015/16 records were not maintained due to a change of roles of the member of staff who had been keeping them (**Action 2.1**).

Up until 2016/17, involvement in outreach activities was ad-hoc and staff involvement beyond the link person with the University outreach team was not factored into the workload model. Starting from 2016/17 however a department outreach team was established and all members were expected to engage with a specified number of activities that were counted into the workload model. As a result of this there is a wider range of members of the department going out to visit schools to run enrichment sessions than in previous years. The gender breakdown of attendees at our events has not been recorded (**Action 2.1**). When running large events involving multiple speakers we always try to ensure a mix of both male and female speakers to ensure the event is female friendly and inclusive.

Actions:

• **Action 2.1**: Collect gender data and feedback from outreach activities so as to review our practice in gender equality in recruiting events.

Words: 5811

	Planned action / objective	Rationale (i.e. what evidence is there that prompted this action/ objective?)	Timeframe (start / end date)	Person responsible (include job title)	Success criteria and outcome
1.	Self-Assessment Process				
1.1	Involve UG and PGT students in the SAT to provide a more comprehensive view of all levels.	Pg7: UG, PGT students had previously been invited to participate in the SAT but since the application process overlaps with the graduation of relevant cohort, there was only minimal contribution to meetings from such students.	Termly from Spring term 2018	SSLC members Course Reps	At least one UG and one PGT student on the SAT.
1.2	Review and refresh SAT membership annually and record on the Work Allocation Model (WAM). Increase the representation of male staff in SAT, maintaining a good balance between genders.	Pg7: Male staff are underrepresented in the SAT (female:male = 9:5). Pg10: Athena SWAN should be an ongoing process to address gender imbalances in both staff and student representation.	Annually from Sept 2018	HoD AS lead	SAT members refreshed annually by considering individual workload, career development needs and personal preference. AS lead (co-lead) reviewed less frequently to maintain stability. Gender balance met in future recruitment of SAT members.
1.3	Carry out annual Staff Survey to ensure that staff perceptions about the working environment in DMS is fully understood. Further revise Staff Survey questions, ensuring they meet the investigation needs of each target group (academic or professional services staff).	Pg45: To better understand the departmental working/studying environment. Pg10: Some survey questions, such as those for induction, promotion and appraisal should be developed for professional staff also, in preparation for applying for a Silver award in three years.	Annually from May 2018	AS lead DM	New questionnaires issued annually. At least 80% response rate obtained. Gender issues identified and relevant actions taken.

1.4	Find effective ways to improve the response rate of Student Survey.	Pg10: Student Survey response rate (22.3%) was below the threshold considered representative of the population surveyed.	Annually from Nov 2018	AS lead DoE	Forms (paper/online) and strategies (timing, integration with events, etc.) of Student Survey are discussed in SAT meeting and tested through years. At least 40% (the rate required for responses to be considered representative) response rate obtained.
1.5	Report from AS SAT lead to feature as a standing agenda item at departmental meetings to ensure all staff members are aware of ongoing work and developments concerning gender equality issues.	Pg10: To raise awareness of gender equality issues.	At least termly in (a staff) Departmental Meetings starting from March 2018	I AS lead (with an agreement with the HoD)	AS related issues, such as flexible working, core hours, seminar invitations, are reported, discussed in the department and progress monitored.
1.6	Monitor Staff and Student data annually. Breakdown the gender uptake values by degree titles to inform departmental development strategy. Consider to publish results on EIMS webpage to ensure transparency.	Pg10: Athena SWAN should be an ongoing process to address gender imbalances in both staff and student representation.	Annually in Autumn term Departmental Meetings	SAT and AS lead	Data collected, reviewed and fully interpreted to monitor and identify trends. Report results and proposed actions to the relevant Department and University committees.
1.7	Maintain the DMS Equality budget (£2,500 in 2017/18) and use it to implement equality/gender actions, e.g. organising or participating in Women in Mathematical Sciences events, support female's research/educational visits, etc.	Pg6: Gender imbalances are seen at nearly all levels with the most significant underrepresentation of female staff being seen amongst academic staff and researcher staff (9%) comparing to the national benchmark (21%). Pg10: Ensure that the Athena SWAN application is a catalyst for further initiatives to promote women in science.	Feb 2018 Apr 201	8 SAT and AS lead	A plan agreed on the optimal usage of Equality budget.

2.	2. Supporting student recruitment						
2.1	Collect gender data and feedback from outreach activities so as to review our practice in gender equality in recruiting events.	Pg14: The number of UG applications made by female candidates is consistently lower than that by males. A small drop in the percentage of applications made by females is seen in	Annually with outreach events	Outreach team DoE	Data collected, reviewed and fully interpreted to monitor and identify trends.		
2.2	Make use of the EIMS webpage to attract more female UG/PG applicants by promoting Athena SWAN and showcasing female role models, possible career paths, women's network and childcare services.	year 2016/17. Pg49: Total number of attendees for outreach activities are recorded but not by gender.	Update the EIMS termly	SAT and AS lead	Role models, including academics, successful graduates, female Dean's list students are displayed. Family-friendly University policies are visible on EIMS.		
2.3	Use the UG Open Day and interview to understand why certain courses are more attractive to females to guide our curriculum design, such as introducing more optional modules for some courses, and/or direct our advertisement of certain courses by emphasising the aspects that may appeal to female applicants.	Pg14: 2015/16 and 2016/17 UG applicants data suggested that certain courses are more attractive for female students comparing to others. The main course, G100-Mathematics, has overall higher male intake than female.	Annually with UG interview (Jan – Apr)	DoE	Data collected, reviewed and fully interpreted to direct practices.		
2.4	Contact individual PG applicants that have been offered a place to understand their needs and concerns, making students feel more welcomed, especially for females.	Pg17: Contacting all PGT/PGR offer holders in 2015/16 increased conversion rate of female students.	Annually in March to July	PG admission	Students contacted within two weeks of offer made. Individual needs identified and responded accordingly.		

2.5	Ensure that at least one interviewer is female in the case of female PGR applicants. Involve female staff from administration team in interview panels, so as to reduce workload for our female academics.	Pg21: As most academics in the Department are male, the PGR interviews are often conducted by two males.	Ongoing	Graduate Administrator	PGR interview panels for female applicants consist of at least one female member of staff.
2.6	Run certain dual level modules in alternate years, so that students have a greater opportunity to study at PGT level at Essex.	Pg24: Due to shortage in staff, many of our modules are dual level, meaning that optionality at PGT level is severely reduced for them and so PGR may be a better option.	Ongoing	DoE (Deputy) DoPG Graduate Administrator	Increased numbers of UG students continuing with PGT study at Essex. The DMS target for 2018 entry is 40 PGT students.
3.	Supporting student progression				
3.1	Further monitor UG degree results data to ensure neither male nor female is disadvantaged throughout their education. Obtain data on students who fail.	Pg15: Gender does not seem a key indicator as to degree outcome in past years but needs further monitoring. Fail data was not available for analysis.	Annually after exar boards	¹ DoE	Data collected, reviewed and fully interpreted to monitor and identify trends. Relevant actions taken.
3.2	Monitor and interpret PGT degree result data annually. Benchmark the PGT result data with similar Mathematics departments as well as HESA standard to identify trends.	Pg18: We observe quite a few PGT withdrawals and failures, all of which except	Annually after exar boards	DoE (Deputy) DoPG Graduate Administrator	Data collected, reviewed and fully interpreted to monitor and identify trends. Analyse the results and formulate actions accordingly.
3.3	Review the unsuccessful PGT cases to understand the reason for high failure/withdrawal rates observed in male PGT study.	in the analysis.	Annually after exar boards	(Deputy) DoPG Graduate Administrator	Unsuccessful cases reviewed and considered by the Education Committee.
3.4	Investigate the reason for high failure rates observed in PGR study. Review the unsuccessful cases to understand the threshold and feedback on the Departmental practice.	Pg22: Over the past 4 years, 6 female and 4 male PGR students failed/withdrew.	Jan 2019 Jun 202	(Deputy) DoPG 9 Graduate Administrator	Focus groups held and outcomes analysed and reporting to DMS Steering Committee so that action can be taken.

3.5	All supervisors to undertake online training on PhD supervision and refresh every 3 years, to help to identify progression issues earlier and aid completion rates.		Dec 2017	Dec 2018	Supervisors HoD	All supervisors to have completed relevant training. Training records monitored in PDR process.
3.6	Review and encourage students to use Proficio funding to attend relevant courses during half- yearly supervisory board meetings. Emails sent to increase awareness of fund and courses. Monitor if there is a gender bias in those not making use of these funds.		At least or month and the travel deadline in	nce per six d before funding n May	Supervisors Graduate Administrator	Proficio funds having been spent.
3.7	Encourage PhD students and postdocs to attend networking events at departmental, University and national level and provide funding (from DMS Equality budget) and promote information on sources of external funding information.	Pg22: Peer support and communication could be facilitated by nurturing a research community in Mathematics for the PGR students.	Ongoing		Supervisors Graduate Administrator	All PhD students present their research in at least one conference and/or research seminar per year. Funding information provided and updated on EIMS webpage. Department funds spent, external funding obtained.
3.8	Use the 3 rd year Capstone projects to increase UG students' awareness of PGT/PGR degrees and equip them with research skills in preparation for further study.	Pg24: Low conversion rate from UG to PGR degree is observed.	Through C project (co for 3rd ye	Capstone Ompulsory ar UGs)	Capstone project Coordinators	Increased numbers of UG students continuing with PGT/PGR study.
3.9	To establish a fund at department level to support PhD students to help with additional caring costs incurred as a result of attending conferences, training or networking events. (In addition to the University budget for staff members.)	Pg35: Mature PhD students having caring needs may need additional support to attend conferences.	March 2018	Sept 2018	SAT and AS lead	Funds established, application guidance produced, information promoted via EIMS webpage.

3.10	Promote the Study Abroad and Industrial Placement schemes on EIMS. Monitor the participant data and detect if there are any gender issues that need to be addressed.	Pg39: Enhance UG student awareness of career development support opportunities.	Ongoing At least one meeting per term		SAO PYO SAT	Study Abroad and Industrial Placement schemes promoted on EIMS. Participation data monitored and fully interpreted.
3.11	Introduce one MA199 seminar in 2018/19 on Equality and Diversity.	Pg39: The MA199 Employability does help students in career progress.	Sept 2018	June 2019	EDD PYO	MA199 Equality and Diversity seminar promoted on EIMS. Participation data monitored and fully interpreted.
3.12	Encourage GTAs and PhD students to undertake CADENZA to obtain the HEA Associate Fellowship.	Pg40: Enhance PGR student awareness of career development support opportunities	Ongoing		Supervisors	Participation data monitored. 100% of GTAs to obtain FHEA status within one year of starting work as a GTA.
4.	Supporting staff recruitment					_
4.1	Make use of the EIMS webpage to attract more female applicants. Keep it updated with the newest information on promotion, training, and flexible working policies.	Pg6: Gender imbalances are seen at nearly all levels with the most significant underrepresentation of female staff being seen amongst academic staff and researcher staff (9%) comparing to the national benchmark (21%). Pg29: Many more male applicants apply for our jobs than female applicants. This imbalance is more severe than the proportion of female population in Mathematics academic positions in the UK. Pg44: 3/20 members of staff may feel uninformed about the University's policies on flexible working and parental leave.	Ongoing Update at least once per term after SAT meetings		AS lead DoM	Links to EIMS webpage is visible from main DMS webpage. Logos of Athena SWAN, LMS Good Practice schemes are promoted to show our commitment of providing gender friendly environments. Increase in number of female applicants to academic positions.

4.2	Continue developing Actuarial Sciences degrees. With the increased number of students new posts in this field might be possible.	Pg26: Actuarial Sciences has a higher percentage of women than other fields of Mathematics.	Ongoing		HoD DoE	Obtain all eight IFoA exam exemptions for both UG and PGT degrees. Monitor uptake numbers by gender.
4.3	Advertise academic/research jobs through LMS/WISE.		Ongoing		DoM	All academic job opportunities are advertised through LMS/WISE.
4.4	Actively participate in Athena SWAN events to learn from what other departments do in terms of attracting more female applicants. Share good practice in recruitment.	Pg29-30: Many more male applicants apply for our jobs than female applicants. This imbalance is more severe than the proportion of female population in Mathematics academic positions in the UK. Si a o N 2	Ongoing		SAT	Participate in at least one Athena SWAN event per year, such as LMS GPS workshops.
4.5	Gain Athena SWAN Bronze award. Make this prominent on the Department webpage and job adverts together with our commitment to the LMS GPS.		Submit applicati on in May 2018	Outcom es announc ed Autumn 2018	SAT DoM	Successful award of departmental Athena SWAN Bronze Award. Logos of Athena SWAN, LMS Good Practice schemes are promoted to show our commitment of providing gender friendly environments.
4.6	Ensure training in Unconscious Bias and Equality and Diversity to be completed by all DMS staff. Circulate up to date information on Equality/Diversity and Unconscious Bias to interview and shortlisting panel members at the time of recruitment for new positions.	Pg30: Staff survey shows at least 5 staff members have not undertaken the compulsory Unconscious Bias training.	May 2018	Sept 2018	HoD DM	Trainings to be completed by all DMS staff by Sept 2018.

5.	5. Supporting staff progression and promotion						
5.1	Review the career paths of current male and female staff, analyse and understand the differences.	Pg6: Lack of females in higher levels such as Senior Lecturer and Professor remains a major concern.	Oct 2018	Oct 2019	SAT	Constructive advice given to female academics on how to successfully build up their career paths.	
5.2	Introduce appraisals for fixed-term academic staff/post-doctoral researchers. Keep staff informed about the University regulations of continuity employment, permanency and redeployment.	Pg27: No formal appraisal process for staff on fixed-term contract.	Sept 2018	Sept 2019	HoD (for academic) Supervisors (for research)	100% full time staff to have taken part in appraisal process. Opportunities such as conversion to permanent contracts are discussed.	
5.3	Make induction information available to all staff (not just probationary staff). Encourage all staff to access this information from the Human Resources webpage through appraisal.	Pg30: Induction is just for new staff. Existing staff should also be updated with the newest policies and regulations. Pg43: Staff survey on the University's family friendly policies illustrate that many established staff members were not be able to access the new University policies through induction.	Annually reviewed with PDR/Appraisal process		HoD	80% staff awareness of latest University policies by Staff Survey.	
5.4	Make the mentoring process more closely linked with appraisal (invite mentor to attend appraisal/PDR meetings of mentee). Ensure personal development needs are discussed in line with the permanency and promotion criteria and feedback to workload allocation.	Pg6: Lack of females in higher levels such as Senior Lecturer and Professor remains a major concern. Pg30: Currently mentoring is running independently from appraisal and workload allocation, which may result in inconsistencies.	Annually reviewed with PDR/Appraisal process		Mentor HoD	Mentors invited to PDR/Appraisal meetings. 80% staff satisfaction on the mentoring and PDR process by Staff Survey.	
5.5	Organize formal/informal events to encourage communications with staff at all career stages to share experiences in career development.	Pg6: Lack of females in higher levels such as Senior Lecturer and Professor remains a major concern. Pg31: All staff who were promoted during the	Jan 2018	Dec 2019	AS lead Staff who have obtained permanency or been promoted	100% staff awareness of promotion/probation policies by Staff Survey.	

		last several years are male.				
5.6	Support/Encourage qualified female staff on leadership training courses, e.g. Aurora, Future Leadership programme.		Annually discussed with PDR/Appraisal process		HoD	At least one female staff having participated in the leadership training before 2019.
5.7	Consider publishing successful probation/promotion applications to members of the department, on agreement with the selected successful applicant.	Pg32: Some staff felt that they would benefit from additional guidance in preparing a successful application, especially for probation staff who had no experience of putting such applications forward.	Oct 2018	Oct 2019	SAT and AS lead	Opportunity discussed with recently promoted academics. Resolution found about how to share promotion experiences and give advices on preparing relevant documents.
5.8	Ensure the mentoring system and Appraiser process work effectively in supporting permanency and promotion applications. Through the PDR process guidance will be given to staff about when they may be well placed to apply for promotion, having previously been discussed at the Research and Education committees.	Pg33: In Staff Survey 2/18 selected "strongly disagree" for they were encouraged to apply for promotion. Pg38: In the past staff put themselves forward as applicants for promotion. This approach may favour staff from particular backgrounds.	Annually reviewed with PDR/Appraisal process		HoD (with an agreement with the DoE and DoR)	"Review against promotion criteria" is brought as an agenda item in appraisal meetings.
5.9	Continue monitoring research publications of female staff and support them to work towards successful REF 2021 submission.	Pg33: The "early research leave" granted to a female academic, as a result of the interim REF inspection, helped her to get enough publications for potential submission to REF 2021.	Annually reviewed with PDR/Appraisal process		DoR HoD	All female staff members are submitted to REF2021.
5.10	Ensure that all members of staff are aware of ways of promoting their research online.	Pg34: Not all staff members are promoting their work actively via Internet.	Jan 2018	May 2018	DoR	All staff have Google Scholar, Research Gate, ORCID profiles.
5.11	Ensure all new appraisers attend the University's Appraiser training.	Pg35: Staff Survey shows concerns in	Dec 2017	Sept 2018	HoD	100% completion of training by Appraisers.
5.12	Suggest a tick box agenda for appraisal meetings to make sure no important discussions are missed.	appraisal.	Dec 2017	Aug 2018	SAT and AS lead	Agenda provided and revised according to across years.

5.13	Carry out a further DMS staff survey to understand people's opinion on what is treated as useful mentoring, networking and management.	Pg36: Staff Survey shows quite a few people are concerned or neutral about the usefulness of mentoring, networking and leadership opportunities provided.	Aug 2018	Sept 2018	SAT and AS lead	Survey carried out. Data collected, reviewed and fed into the future practices.
5.14	HoD to submit application to University for new academic staff based on increased student numbers.	Pg37: Many people feel overburdened by large increase in admin responsibilities.	Oct 2019	Oct 2020	HoD	Application submitted.
5.15	Organize workshop sessions run by recently promoted staff to discuss experience of promotion procedure with other staff.	Pg38: The department is not seen favourably in terms of valuing the full range of an individual's skill and experience by Staff Survey.	Sept 2018	Dec 2019	SAT Recently promoted staff	Event organised. Staff concerns understood. 100% staff awareness of promotion criteria by Staff Survey.
5.16	Making use of Research Away Day to review successful grant applications and encourage joint grant applications. Increase opportunities for junior staff to be named as CI on research grant applications.	A A Pg40: Very few grant applications are made by female staff members.	Annually in Research Away Days		DoR	Grant application data monitored. Increase in number of research grant applications made in which the Principal Investigator or the Co-Investigator is female.
5.17	Facilitate advice and feedback by senior staff, both through formal mentoring and informal research networks.		Ongoing		DoR	Grant applications are reviewed by at least one senior staff member in the department before submission.

6.	6. Flexible working and career breaks							
6.1	Ensure better departmental communication of information regarding leave allowances and management, as well as liaison between the member of staff, the Department, and HR.	Pg41: Improved understanding of the maternity leave policy would have been beneficial to ensure awareness of all entitlements and could make more informed choices.	Ongoing		DM HoD	100% awareness of maternity/family leave policies by Staff Survey.		
6.2	University policy updates are added to the agenda for the twice-termly departmental meetings. Increase awareness of University policies around career breaks.	Pg44: The Staff Survey shows that 3/20 members of staff felt uninformed about the University's policies on flexible working and parental leave. Pg45: No requests from DMS staff has been made to take a career break.	Ongoing		DM HoD	100% awareness of gender equality policies by Staff Survey. (A N/A option to be an allowable answer.)		
7.	7. Organisation and culture							
7.1	HoD/DM send general reminder to all staff asking them to seek professional advice if they have unpleasant experience because of their gender. Follow up with potential feedback and take relevant actions.	Pg46: 2 staff agreed that they have experienced a situation(s) where they have	May 2018	Aug 2018	HoD DM	0% concern on gender related uncomfortable experiences by		
7.2	A poster advertising the services of the Network is prominently displayed within the department.	felt uncomfortable because of their gender.			DM	Staff Survey.		
7.3	Consider increasing the number of female role takers following the permanency of both female staff members. Encourage female academics to participate in committees as a part of yearly appraisal. (Where staff are members of committees this is recorded in the WAM so the HoD will reallocate other duties accordingly.)	Pg47: Significant gender imbalance is seen in key departmental role holders.	Annually with Appraisal		HoD	Both female, permanent, academic staff members appointed to main committees in the Department influencing its direction.		

7.4	Encourage eligible female members of staff to consider standing for Senate.	Pg49: No female in influential external committee due to experience.	Sept 2018	Sept 2021	HoD	80% staff members aware of procedures for standing for membership of Senate by Staff Survey.
7.5	Continue to monitor staff satisfaction with allocation of duties. Gather people's opinion of workload allocation in annual appraisal and departmental meetings. Revise the workload model to ensure fairness and transparency.	Pg50: 30% of people did not agree that the workload model is fair and transparent.	Annually revise the workload model.		HoD DoR DoE	100% agrees on transparency of the workload allocation by Staff Survey. 80% satisfaction on workload allocation by staff Survey.
7.6	Monitor times of social gatherings and meeting times (such as morning coffee sessions, departmental meetings, research seminars) and revise, if needed, to make the times convenient for staff with care duties.	A Pg50: 2/19 people did not agree with that meetings are held at times which are suitable for those that work flexibly. To do m		vith Staff	SAT and AS lead	100% satisfaction on meeting times.
7.7	Review the success of holding core departmental meetings between 10am-3pm and revise if necessary.			er ntal	HoD	100% satisfaction on meeting times.
7.8	The seminar organiser will encourage nominations for female speakers and prioritize accordingly.	Pg52: Less female research seminar speakers than males in past four years.	Academic 2022/23	year	Seminar organizer SAT	Number of female seminar speakers increases with years and 50% of seminar speakers are female in 2022/23.