Athena SWAN Bronze Department award renewal application

Name of institution: The University of Nottingham

Date of application: November 2015

Department: School of Mathematical Sciences

Contact for application: Professor Ian Dryden

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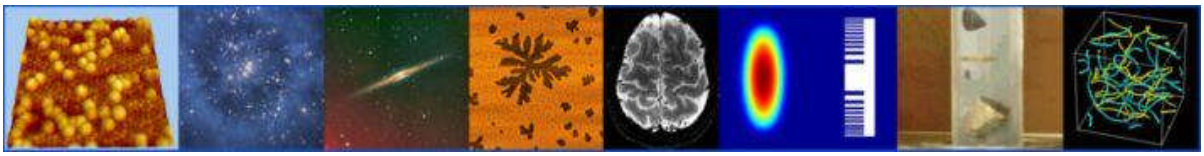
Date of previous award: April 2011, extended by one year April 2014

Date of university Bronze and/or Silver SWAN award: April 2013

Level of award applied for: Renewal of Bronze SWAN award



Glossary

Acronym	Full Name
APPLE	Academics and Administrators Professional Personal and Leadership Experience
ASG	Athena SWAN Group
AWM	"Advancing Women in Mathematics: Good Practice in UK University Departments", LMS Report, 2013.
CES	University of Nottingham's Careers and Employability Services
EWM	European Women in Mathematics Association
HoRG	Head of Research Group
HoS	Head of School
LMS	London Mathematical Society
MathSoc	University of Nottingham Mathematics Society
PD	Postdoc
PDPR	Personal Development and Performance Review
PGR	Postgraduate research student
PGT	Postgraduate taught student
RBDM	Research and Business Development Manager
SoMS	School of Mathematical Sciences
STEM	Science, Technology, Engineering and Mathematics
UoN	University of Nottingham
WAND	Women's Advancement Networking and Development
WinSET	Women in Science, Engineering and Technology

1. **Letter of endorsement from the Head of Department**

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27 November 2015

Dear Sir/Madam

I give my strongest possible support for the renewal of our Bronze Athena SWAN award. One of my key roles is as a member of the Athena SWAN group, chaired by Susanne Pumpluen, and I am very proud of the group's achievements.

As part of our strategy we are striving very hard to increase the number of female academic staff and to provide a highly supportive environment for all. I am very pleased to state that our hard work since receiving the Bronze Award is paying off. Two new female Assistant Professors have been appointed this year and a female member of staff was promoted to Professor in August 2015.

Despite this recent success there is still a very long way to go. We are very disappointed that we still have a low number of female academic staff in the School. However, the outlook is more positive with initiatives in place that are designed to increase the female/male ratio, although this will take time.

An important issue is that too few women apply for our job vacancies. I am very keen to address the problem, and so on each appointment panel in the School at lecturer level and above we have an Athena SWAN champion (usually the Head of School). The champion ensures that pro-active approaches to encourage applications will be made to women as well as men, and that any gender specific issues are addressed fairly for all candidates.

We have built a strong sense of academic community in our School, with excellent communal spaces for both staff and students in our superb building (newly built in 2011). I regularly celebrate the success of all staff with congratulations announcements. We are very supportive of dual career couples, and have several in the School. The University of Nottingham holds a Silver

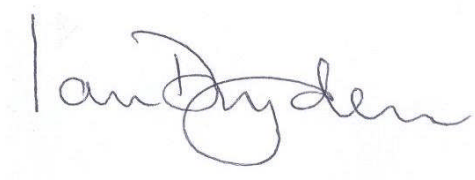
Award and is a very active leader in gender equality with its Women in Science Engineering and Technology (WinSET) group. Several new members of female staff have benefited from University housing, which has been invaluable when arriving with their families.

The School is a member of the London Mathematical Society Good Practice Scheme and has a prominent link on our front page. We hold regular events on equality issues, for example two `Women and Men: Careers in Academia' workshops. The `Women in Mathematics' YouTube videos produced by the School have gained wide attention and we have assigned significant resources to support such activities. We have had initiatives to invite more female seminar speakers, for example all external invited speakers were female in the Mathematical Medicine and Biology research group this semester, and the most recent School Colloquium was given by a prominent female speaker. We have also worked with the student society to arrange events to attract female students to research and PhD studies.

The School Athena SWAN committee will continue to meet regularly and ensure ongoing and new actions are completed.

I very strongly support our application for renewal of the Bronze Award.

Yours faithfully



I L Dryden
Professor of Statistics
Head of School

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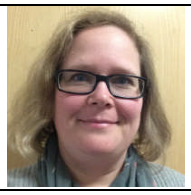
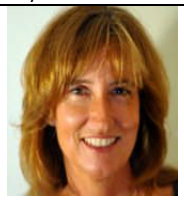
2. The self-assessment process

a) In the following, actions in the old (2011-14) and new (2014-18) Action Plans (see Appendices I and II) are referenced as **O1**, resp. **N1** etc.
There are 11 members of the self-assessment team, called the Athena SWAN group (ASG), seven women and four men. It includes key decision makers, representatives across all levels, and staff who arrived from overseas to take up a post in the UK, thus facing additional challenges.

The University of Nottingham's (UoN's) Women in Science, Engineering and Technology (WinSET) representative Dr Tony Stevens left in 2013 and was replaced by Dr Elizabeth Davey. The School's Head changed in January 2014 from Prof David Riley to Prof Ian Dryden. Professor Stephen Coombes and Dr Lisa Glaser joined the group in September 2014.

The Athena Swan Group

					
Mrs Andrea Blackbourn	Professor Stephen Coombes	Dr Elizabeth Davey	Dr Reuben O'Dea	Professor Ian Dryden	Professor Ivette Fuentes
					
Dr Lisa Glaser	Dr Huiling Le	Ms Lisa Mott	Dr Daniel Nicks	Dr Susanne Pumpluen	Mrs Alison Thorp (minuting secretary)

Mrs Andrea Blackbourn is the School Manager. She joined the School in 1999 and thoroughly enjoys her hugely varied role. She is a married working mum with two children aged 21 (so no longer a child!) and 14.

Professor Stephen Coombes is a Professor of Applied Mathematics and has been with the School since 2003. Together with his wife he is raising three daughters (aged 10, 15, 18), the oldest of which has just started a degree in Engineering Mathematics at the University of Bristol.

Dr Elizabeth Davey is the WinSET Coordinator and Athena Coordinator. She provides advice to the self-assessment teams on their applications and general Athena SWAN work and shares best practice around the University. She has a husband and 8 year old daughter and feels that the flexibility within her role allows her to have a good work/life balance.

Dr Reuben O'Dea is a Lecturer, having joined the University as a permanent member of staff in 2013. He was previously an undergraduate (2000-04), PhD student (2004-07) and PDRA (2008-2010). He is married with a 2 year old daughter and a second child has just arrived. He took paternity leave in 2013, and again in October 2015.

Professor Ian Dryden is a Professor of Statistics and, since January 2014, Head of School (HoS). He is married with a 16 year old daughter, who was six months old when he first started at Nottingham.

Professor Ivette Fuentes is a Professor in relativistic quantum information, currently on leave for two years, holding a Chair position at the University of Vienna. Ivette is a single mother of a nine year old boy she takes care of without any kind of family support since she arrived in Nottingham in 2009 as a lecturer when he was three years old. She was promoted to Professor in 2015.

Dr Lisa Glaser is a Research Fellow on the European Research Council Starting Grant "Challenging General Relativity" with Dr Sotiriou. She obtained her Ph.D. in Denmark where she still flies regularly to visit her boyfriend.

Dr Huiling Le is an Associate Professor and Reader in Probability and Director of the MSc courses in statistics. She joined the University of Nottingham in 1991 as a lecturer and has one grown-up son.

Ms Lisa Mott is a mathematics PhD student, and prior graduate of the School. She received the East Midlands Science and Technology Award (EMSTA), the University's “First in the family bursary” and BP's Ambition Award. Since 2013, she coordinates the women's lunch, funded by the School of Mathematical Sciences.

Dr Daniel Nicks has been a Lecturer since January 2012. He was previously a PhD student at Nottingham (2006-10) before working at the Open University as a postdoc and then a lecturer. He is married to another mathematician (at Birmingham), and has recently taken a period of paternity leave to look after his daughter.

Dr Susanne Pumpluen (Chair) joined the School as a Lecturer in 2004, after finishing her Habilitation in Germany. She was promoted to Associate Professor in 2008 and currently is the School's Careers Advisor, Tutor to Women, and represents the School on the University's WinSET group. She has 15 year old twins, whom she has been raising without any family support network; her partner is an academic who worked overseas until recently.

Two members of the team greatly benefitted from having their children in one of the University of Nottingham nurseries that are situated on the same campus as the School of Mathematical Sciences (SoMS).

b) Since September 2013, the ASG has met regularly and more than four times per year (**O5.1**), and reports to all School Meetings. Minutes are published on the School's internal intranet. Progress is tracked and feedback on progress concerning the new Action Plan was received from the University's WinSET Challenge and Support Group in March 2015.

All staff are regularly encouraged to undergo wider engagement with institutional equality and diversity training provided by the university (**O5.2**), particularly exploiting online resources.

Surveys for academic staff, PGRs, and postdoctoral researchers addressing work-life balance and career support issues were conducted in 2013 and 2015 (see references to 2013 and 2015 Survey throughout this document). Survey participation in each case was good, thereby providing a fair reflection of the School (2013: 34 staff, 67 PGR/PD respondents; 2015: 46 staff, 50 PGR/PD respondents).
Since the extension of the Bronze Award in 2014, the team has sought input on the new Action Plan via several focus groups, and used this to devise an improved approach.

c) The ASG will continue to meet on a regular basis and report to all School Meetings, to continue to raise awareness about its work and to facilitate the exchange of ideas between its members and the rest of the School. Team members will track actions, to check time-lines and progress. Feedback from members of the School on progress, issues arising or room for improvement will be sought on a regular basis via focus groups, questionnaires or similar. The Chair of the ASG is a member of the University's WinSET group, which will continue to monitor progress of the new Action Plan. We hope to be strong enough to apply for a Silver award within the next three years.

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3. A picture of the department – maximum 2000 words

a) The School of Mathematical Sciences belongs to the Faculty of Science. It is an international centre of excellence in Mathematics, with over 60 full-time academic staff, providing a multi-national and diverse research and teaching environment that connects with mathematics communities worldwide; this international stance is reflected by the Times Good University Guide 2013's assessment of UoN as "the nearest Britain has to a truly global university''.

We have around 20 postdocs and around 900 undergraduate and postgraduate students. The School also teaches mathematics to around 1000

students from other schools. Currently, the School has six female academic staff in place and hosts four female fellowship holders (one Anne McLaren Fellow, one Leverhulme Early Career Fellow, one Daphne Jackson Fellow and one Nottingham Research Fellow who also holds a Royal Society University Research Fellowship).

Since 2011, the School has been located in a dedicated and specially designed building with state of the art facilities, providing substantial opportunities for social and academic interaction between staff and students.

The Mathematical Sciences Building

Mathematical Sciences Atrium

The School's research spans a broad spectrum of pure and applied mathematics and statistics. Inter-disciplinary collaborations exist between the SoMS and, for instance:

- Nottingham University Hospitals NHS Trust;
- the Centre for Plant Integrative Biology;
- the Sir Peter Mansfield Imaging Centre;
- the Science, Social Sciences, Arts, Medicine and Health Sciences and Engineering Faculties.

Currently the School sits in the top 10 nationally within Mathematical Sciences for 'research power' and ‘research quality’; with 32% of its research recognised as world leading and a further 56% as internationally excellent. Its research environment was classified as 75% world-leading in vitality and sustainability, with the remaining 25% internationally excellent reflecting the outstanding setting the School provides for its academic staff as well as its postdoctoral and postgraduate researchers.

b) Data -Student data

(i) Numbers of males and females on access or foundation courses

The School contributes to the University's foundation year programmes in Science and Engineering and the Natural Sciences degree, but does not run any access or foundation courses.

(ii) Undergraduate male and female numbers – full and part-time

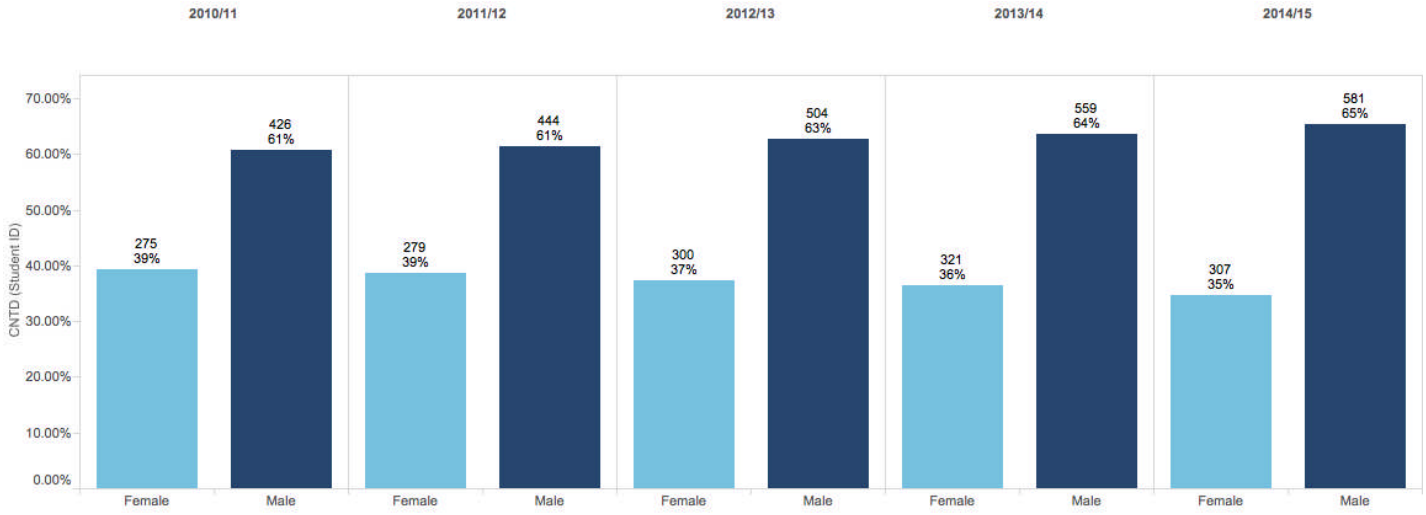

Figure 1: School of Mathematical Sciences undergraduate percentages and total numbers (full and part-time) by gender and year.

The national average of female mathematics students in the UK is 42% (LMS Gender Statistics 2011 in "Advancing Women in Mathematics: Good Practice in UK University Departments").

After rising to a peak of 39% in 2011/12, the percentage of female full and part-time students has declined slightly to 35%, see Figure 1, which reflects a national trend in A-level choices (and in particular for Further Mathematics). These statistics indicate that we need to encourage more female students to apply, see also Figure 4. We expect that our actions (**N1.1),** (**N1.2)**, (**N1.8)** will have a positive impact and reverse this trend in the future.

(iii) Postgraduate male and female numbers completing taught courses – full and part-time

Academic Year	Number of students			Percentage of students	
	Female	Male	Total	Female	Male
2014/15	34	38	72	47%	53%
2013/14	22	34	56	39%	61%
2012/13	28	41	69	41%	59%
2011/12	11	35	46	24%	76%
2010/11	15	21	36	42%	58%

Table 1: School of Mathematical Sciences taught postgraduate percentages and total numbers (full and part-time) by gender and year.

The number of students taking one of our nine postgraduate taught (PGT) courses has broadly increased over the last four years (**O2.2**), see Table 1. The proportion of female PGT students in the UK averages 32% (LMS Gender Statistics 2011). Apart from a dip to 24% in 2011/12, the proportion has risen to 47% in 2014/2015.

We will continue our initiatives (**O2.1, O2.2, N1.1, N1.10, N1.11, N1.12**) to attract postgraduate students. The School produces a Postgraduate Newsletter and a Postgraduate Study Brochure (featuring female role models in academia and Women in the Sciences (**N2.2.**)), the latter also containing information on support for students with children, and mature applicants.

The School has a female Tutor to Women who advises both female PGR and PGT students (**O2.2.2**).

Extract from Postgraduate Brochure (2015).

(iv) Postgraduate male and female numbers on research degrees – full-time and part-time

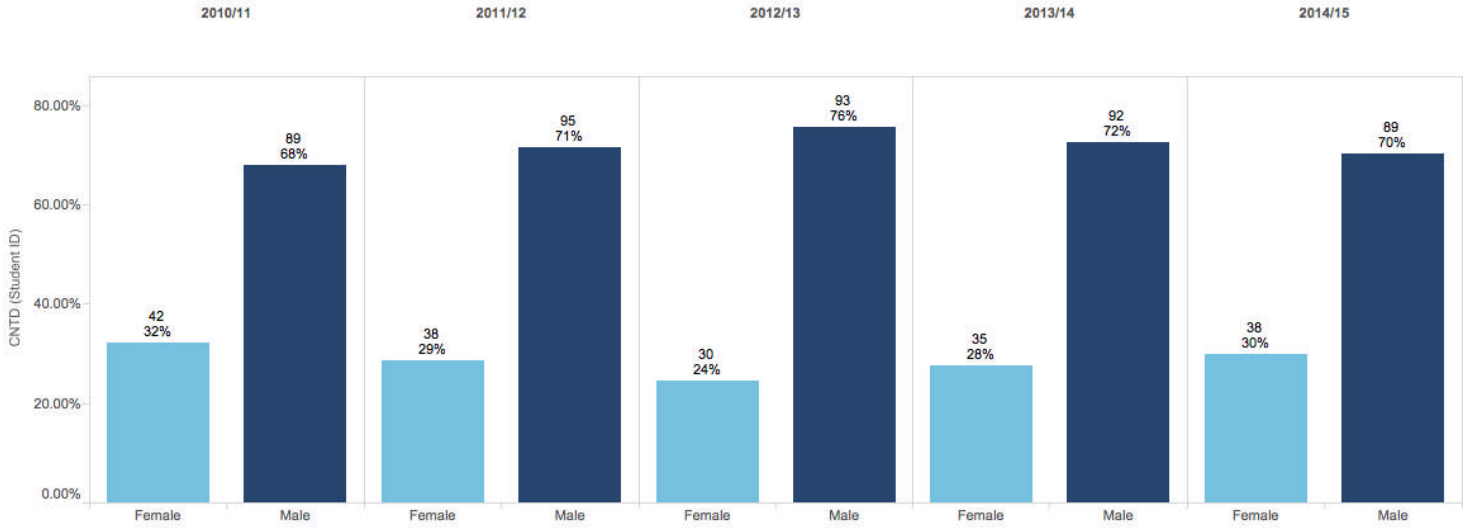

Figure 2: School of Mathematical Sciences research student percentages and total numbers (full and part-time) by gender and year.

The proportion of female PGRs commencing study during the last five years is in the range 24–32%, consistently exceeding the UK average of 19% (LMS Gender Statistics 2011), see Figure 2.
A range of initiatives has been undertaken to achieve this success, and to drive future improvements, we highlight those achieved since our last submission in April 2014:

Role models (O2.1, N1.1, N1.12, N2.3, N2.6): Success stories from our staff are featured on the School's home page, frequently including women. We launched several online video interviews, involving seven female staff, including:

- a Numberphile video (Mathematical Way to Choose a Toilet – at a music festival) by Dr Ria Symonds on YouTube in 2014 (over 564,013 views);
- the first and second series of "Women in Maths" videos on YouTube (over 12, 000 views since 2014) involving five female members of the School;
- an outreach video on YouTube "Relativistic Quantum Information" by Professor Ivette Fuentes;
- the "Women in Maths" Facebook page profiling female mathematicians.

Summer bursaries (O2.2, N2.1): This successful scheme attracts female students each year (2011, 3 out of 9; 2012, 5 out of 13; 2013, 2 out of 11, 2014, 6 out of 14, 2015 5 out of 14 students were female), and provides a first idea of what it is like to do research. In the last four years, eight of these students (six male, two female) became PGRs at the School. Since 2014,

there are two externally funded summer research internships exclusively for female undergraduates for five years (Dr Margaret Jackson Bursary).

Social activities (O5.6, N2.8, N2.9): During 2012-2015 we have had a weekly lunch for female School members, sponsored by the School. These lunches were opened to all undergraduate students interested in talking to someone about doing a PhD in 2015, and to all female taught postgraduate students. The sessions help female PGT and PhD students, postdocs and academic staff to get to know each other and exchange advice and experiences, to encourage them to pursue an academic career. Reminders are sent out by email and via Facebook groups. Since Autumn 2015 this has evolved into a bi-weekly afternoon tea with increased attendance.

In 2015, we also had a women's lunch in the spring semester for first and final year undergraduate students and PGRs.

(v) Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees

The acceptances of UG applications show no significant change over the last years and the acceptance rates are almost identical for males and females (and have varied between 13% and 21%). See Figure 3.

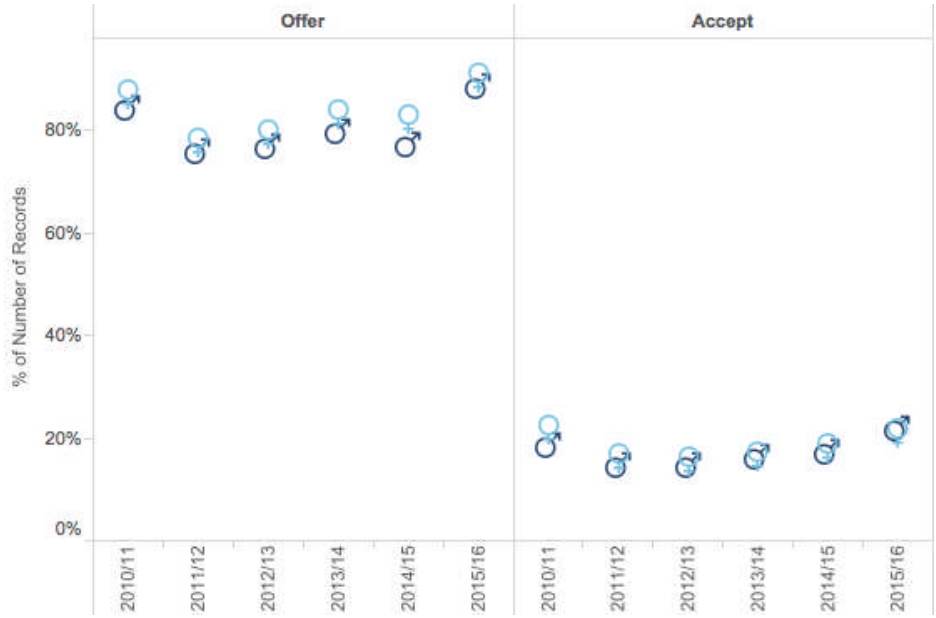

Figure 3: Offers and acceptances as a percentage of UG applications made for Mathematics courses at the University of Nottingham for males (♂) and females (♀).

For PGT the trend is also that acceptance levels are almost identical for males and females (though with more variability due to the smaller population size). See Figure 4.

Figure 4: Offers and acceptances as a percentage of PGT applications made for Mathematics courses at the University of Nottingham for males (♂) and females (♀).

For PGR courses the percentage of female acceptances is generally higher than that of males, reflecting a higher percentage of offers. See Figure 5.

Figure 5: Offers and acceptances as a percentage of PGR applications made for Mathematics courses at the University of Nottingham for males (♂) and females (♀).

To attract more female PGT and PGR students, since autumn 2013 the School has a Women in Science page linked to its homepage (**N1.1**).

Degree classification by gender

A higher or equal percentage of females gain 1st and 2:1 degrees compared to males in all years, except 2013/14. See Table 2. This is in line with the national picture: in 2012/13, 70% of female students on all degree courses (not just mathematics) achieved a first or upper second degree versus 65% of male students (HESA).

Academic Year	1st		2:1		2:2		3rd		Pass	
	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂
2014/15	20 27.40%	37 28.68%	38 52.05%	54 41.86%	10 13.70%	28 21.71%	5 6.85%	10 7.75%	0 0%	0 0%
2013/14	18 25.71%	23 25.00%	27 38.57%	41 44.57%	16 22.86%	20 21.74%	9 12.86%	8 8.70%	0 0%	0 0%
2012/13	13 23.63%	39 33.33%	30 54.55%	46 39.32%	9 16.36%	23 19.66%	3 5.45%	8 6.84%	0 0%	1 0.85%
2011/12	19 36.54%	27 29.67%	23 44.23%	40 43.96%	7 13.46%	16 17.58%	3 5.77%	8 8.79%	0 0%	0 0%
2010/11	30 40.54%	24 25.81%	29 39.19%	35 37.63%	10 13.51%	26 27.96%	5 6.76%	8 8.60%	0 0%	0 0%

Table 2: School of Mathematical Sciences undergraduate degree classification for females (♀) and males (♂), showing number and percentage by gender of students awarded a given degree class.

Staff data:

(vi) Female:male ratio of academic staff and research staff – researcher, lecturer, senior lecturer, reader, professor (or equivalent)

Staff data for the period 2011 - 2015 is summarised in Table 3.

	Staff data 2011 – 2015											
	Level 4				**Level 5 (Lecturer/Assistant Professor)**				**Level 6 (Associate Professor/Reader)**				**Level 7 (Professor)**			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
2015	16	4	20	20.0	24	3	27	11.1	22	3	25	12.0	18	0*	18	0.0
2014	13	2	15	13.3	24	3	27	11.1	20	3	23	13.0	18	0	18	0.0
2013	11	2	13	15.4	22	1	23	4.3	16	3	19	15.8	16	0	16	0.0
2012	13	6	19	31.6	22	1	23	4.3	19	2	21	10.0	14	0	14	0.0
2011	17	5	22	22.7	19	2	21	9.5	20	2	22	9.0	16	0	16	0.0

Table 3: Staff data highlighting female / male (♀/♂) representation at each level (Level 7: Professor, Level 6: Associate Professor, Level 5: Lecturer, Level 4: Research Fellow) over the period 2011 – 2015. *Note that in August 2015 a female staff member was promoted to Level 7

Currently, the School's female staff comprises one professor (Ivette Fuentes, promoted in 2015), two associate professors, one part-time lecturer (0.8fte), one Leverhulme Senior Research Fellow (in a shared post with Biosciences), one lecturer holding both a Nottingham Research Fellowship and a Royal Society URF grant and one Daphne Jackson Fellow (0.5fte), and an assistant professor on a one year contract.

The School is seeking to address the imbalance both by recruitment (into both junior, and more senior appointments to remedy the limited female representation at professorial level) and through career development initiatives. Specifically, the following actions are being taken:

- Action on recruitment, see Sections 4, 6 (**N3.3, N3.4, N3.6, N3.12**).
- Stronger publicity regarding our policies (**O4.4, O6.1, N3.8**).
- Action via fellowships, see Section 4 below and **N3.2**.
- A revamping of the University's recruitment process to ensure greater transparency and improved vigilance so that recruiters are properly trained, for example on equality and diversity issues (**O1.5, O5.2, N1.5**).
- Action through career development. A range of activities have been instituted, including:
    - an improved Personal Development and Performance

Review (PDPR) process, in which encouragement to seek promotion and relevant training is emphasised; and

- a pro-active approach to promotion and progression via CV review by the School promotion group (**N3.4**).
  The improved PDPR process is viewed as a valuable resource to enhance career progression, according to the Staff surveys (2013: 63%; 2015: 65%).

The School has been highly proactive in its attempts to recruit more female members of staff into all levels, e.g. there has been an increase in females shortlisted and made offers in the past year.

(vii) Turnover by grade and gender

Since 2011 (the year of the initial Athena SWAN Bronze award), there has been a turnover of 15 (8 UK, 7 international) academic staff. They either resigned to move for career advancement in the UK or overseas (7), for family reasons (5), retired (1) or sadly died in service (2); of these 15 leavers one was female. In exit interviews staff stated that they were happy with the University or the School.

In the same period, the School has recruited 23 staff including two female Assistant Professors and three female fellows. We are delighted with our success in pro-actively attracting these female staff through the fellowship route into tenure-track lectureships. Thus there has been a small, but very welcome, improvement in the balance of female to male staff.

[1946/2000]

Supporting and advancing women's careers

4. Key career transition points

(i) Job application and success rates by gender and grade

Table 4 summarises the data for the period 2010 - 2015.

	June 2014 – May 2015											
	Level 4				Level 5				Level 6				Level 7			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
Applications	173	39	212	18.4	96	13	109	11.9	19	4	23	17.4	57	5	62	8.1
Shortlist	20	8	28	28.6	12	4	16	25.0	3	1	4	25.0	3	0	3	0
Offers	8	3	11	27.3	4	2	6	33.3	2	0	2	0.0	0	0	0	0
	June 2013 – May 2014											
	Level 4				**Level 5**				**Level 6**				**Level 7**			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
Applications	210	27	237	11.3	75	12	87	13.8	6	3	9	33.3	10	3	13	23.7
Shortlist	31	9	40	22.5	12	1	13	7.6	1	0	1	0.0	0	0	0	0
Offers	7	1	8	12.5	5	0	5	0.0	1	0	1	0.0	0	0	0	0
	June 2012 – May 2013											
	Level 4				**Level 5**				**Level 6**				**Level 7**			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
Applications	58	11	69	15.9	57	8	65	12.3	49	6	55	10.9	19	0	19	0.0
Shortlist	20	4	24	16.7	9	0	9	0.0	6	1	7	14.3	4	0	4	0.0
Offers	7	1	8	12.5	3	0	3	0.0	2	0	2	0.0	1	0	1	0.0
	June 2011 – May 2012											
	Level 4				**Level 5**				**Level 6**				**Level 7**			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
Applications	179	35	214	16.4	121	30	151	19.9	0	0	0	-	18	1	19	5.3
Shortlist	29	7	36	19.4	13	2	15	13.3	0	0	0	-	2	0	2	0.0
Offers	7	2	9	22.2	2	0	2	0.0	0	0	0	-	1	0	1	0.0
	June 2010 – May 2011											
	Level 4				**Level 5**				**Level 6**				**Level 7**			
	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀	♂	♀	Total	%♀
Applications	51	9	60	15.0	38	5	43	11.6	0	0	0	-	0	0	0	-
Shortlist	10	5	15	33.3	12	0	12	0.0	0	0	0	-	0	0	0	-
Offers	6	1	7	14.3	4	0	4	0.0	0	0	0	-	0	0	0	-

Table 4: Job application and success rate by gender and grade for the years 2010 – 2015. N.B. These data disregard the small number of applications that did not specify gender.

	Overall percentages of women 2010 - 2015	
	Level 4/5	**Level 6/7**
Applicants	15.1	11
Shortlist	19.2	10.5
Offer	15.9	0

Table 5: Percentage of women combined over the years 2010 – 2015 for levels 4/5 or levels 6/7 jobs.

The overall percentage of women who are shortlisted is in close agreement with the percentage of female applicants. The percentage of offers at level 4/5 is in line at 15.9%, but the number of offers at level 6/7 is zero (although only 7 offers were made in the whole period). The clear messages from these data are that the percentage of females applying to our posts is too small (**N3.6**), but that the percentages of females shortlisted or given job offers are not unduly out of line with the number of applications. There are signs in the past year that the percentage of shortlisted females is improving at levels 4-6, and that the number of offers is also improving at levels 4 and 5.

In seeking to fill vacancies, the School has an Athena Swan champion on each panel and has taken an active approach in contacting female mathematicians at other universities to advertise vacancies. This approach has recently paid dividends, with the appointment of Dr Rachel Nicks (Birmingham) as an assistant professor, who will join the School in August 2016 (following the birth of her first daughter in July 2015) and Dr Susama Agarwala (for 2015/2016). We have also invested in the future by extending the permanent contract of Dr Bindi Brook from 0.2 to 0.8 FTE (since Jan 2015), and we are delighted that this has helped her secure a subsequent MRC grant (£800k, 2015).

The School has also been pro-active in using fellowships with associated tenure-track routes to lectureships as a means of attracting more women. We have successfully appointed three female fellows by this route, one each via the University's Anne McLaren Fellowship and Nottingham Research Fellowship scheme, another via a Leverhulme Fellowship. The UoN Fellowships are targeted towards outstanding early career female researchers, providing additional funding for research costs up to £25k p.a. and additional childcare costs of up to £5k p.a. This approach will continue via the new actions **N3.2, N3.3**.

In addition to the three female fellows on tenure-track routes to lectureships at SoMS, since 2011, three of our female PGRs went on to permanent academic positions overseas and three of our female PDRAs have gone on to secure permanent academic posts elsewhere in the UK.

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

Table 6 shows promotion applications. The disparity in female representation within the academic staff detailed in Section 3 b) (vi) is echoed here. However, it is noteworthy that the disparity in candidates put forward for promotion is significantly reduced, reflecting the School's commitment to retention and advancement of talented female academics. Indeed, the overall success rates are 100% for female applicants, and 50% for males.

	Promotion data 2010 – 2015					
	Candidates		**Promoted**		**% Success rate**	
	♂	♀	♂	♀	♂	♀
2010/11	2(5), 2(6)	1(4)	1(5)	1(4)	25	100
2011/12	2(5,6)	2(4,5)	1(6)	2(4,5)	50	100
2012/13	2(5,6)	0	2(5,6)	-	100	-
2013/14	3(5), 1(6)	0	2(5)	-	50	-
2014/15	2(5)	1(6)	2(5)	1(6)	100	100

Table 6: Staff data indicating the number of applications for promotion, and success rates over the period 2010 – 2015. Numbers in brackets indicate the staff grade at the time of application.

Potential candidates are identified via PDPR; the guidance to reviewers includes a request that particular attention be paid to promotion prospects.

(iii) All job advertisements are worked gender neutrally. University and School policies in relation to flexible working and childcare availability are clearly stated in the staff handbook.

From 2011 - 2013, advertisements for posts in the research and teaching family contained the sentence “Though the appointment will be made purely on merit, we particularly encourage applications from women as part of our commitment to promoting diversity.” From Autumn 2013 our advertisements have featured the sentence “In recognition of its commitment to promoting women in science, The University of Nottingham is one of five universities to hold a Silver Athena Scientific Women’s Advancement Network SWAN Award”(**N3.5**).

In 2013, the School started a pro-active approach to recruitment: as part of this, openings are advertised directly to female academics working in the relevant research area (**N3.3**).

(iv) Support for staff at key career transition points

In view of the academic staff data presented in Section 3 b) (vi), two career transition issues can be identified:

- advancement of female staff into senior roles;
- recruitment of more female staff, and promotion of lower level staff.

To address these issues, the following actions have been instituted.

Career advancement of female staff into senior academic roles.

- Since 2012 the School has an improved study leave scheme: academic staff are entitled to apply for study leave after six teaching semesters (since the start of contract or last sabbatical). Study leave is encouraged at key transition points, e.g. if it enhances an application for promotion (**O6.1**), and the School plan allows up to four proposals a year to be supported.

- Staff who are seeking promotion are invited to participate in a promotion exercise, see 5) (i) below. Additionally, staff are invited to submit their CV to the Heads of Research Groups for informal feedback on their chances for promotion each Spring (**N3.4**).

- The School's Research and Business Development Manager (RBDM) mentors staff on grant submissions and management and regularly promotes opportunities for research and knowledge transfer funding. Academic mentoring is provided by colleagues in the corresponding research area. Since 2014, there is a formal internal peer review process prior to submission (**N3.10**) for grants and fellowships with a value of £100k or greater, to enhance success rates and further support the development of female academics.

- Studies show that, on average, females receive lower scores on student evaluations of teaching than males (e.g., MacNell, Driscoll, Hunt, What's in a Name: Exposing Gender Bias in Student Ratings of Teaching). To counter this, the peer-review of teaching scheme was re-launched in 2014/15: everyone who lectures will both observe and be observed by another staff member, and a feedback form utilised. This may be used to support a promotion application (**N3.15**).

Recruitment of more women, and promotion of staff into and within academic posts.

- The recruitment initiatives described elsewhere aim to increase the influx of female academics to the School (see Section 4(a)(i) and **N3.3, N3.4, N3.6**). In particular, the tenure-track Anne McLaren and Nottingham Research Fellowships provide an effective method to advance research staff to permanent Academic Staff (**N3.2**).

- Female staff are encouraged to attend the UoN's key training programmes (APPLE, WAND) designed to help women in their career progression and offering mentoring. One female member of staff attended the WAND programme during the last four years (**O3.2**).

  Since 2013, research and teaching staff can bid for funds from our Research Board on top of a guaranteed yearly personal allowance of £1000, which can be used to attend conferences etc.

5. Career development

(i) All staff undergo an annual appraisal (PDPR) process, which recognises broader skills and competencies and allows a continuous line of support. This provides an opportunity to discuss future career plans and possible promotion applications, to analyse performance over the last 12 months, and set goals for the following 12 months and beyond. It also serves to highlight suitable training and career development opportunities, where appropriate.

The 2013 and 2015 surveys indicate that a majority of staff, postdocs and PGRs are aware of UoN training courses (2013: 90%, 85% respectively; 2015: 73%, 95%, respectively) (**N3.1**), and value the PDPR and mentoring/support mechanisms (as appropriate) as an aid to career development (2013: 63%, 73%; 2015: 65%, 76%). This latter increase reflects action **N3.8.**

Each September all staff are invited to apply for a promotion by the University. Aspiring staff are first asked to obtain advice from their HoRG, the Directors of Teaching and Learning, and Research, and if desired, also from the HoS, and then to participate in a School-based promotion exercise (providing guidance and feedback before submission). Since 2014, the School and University monitors how many applications are put forward (**N3.4, N3.8, N3.9**).

(ii) The School runs two Mentoring Schemes: one for academic staff, and one for postdoctoral research assistants (reflecting their different needs). Their principal aims are to provide support with goal setting and career management and to share knowledge and expertise (**O3.1, O3.3, O4.1**). For postdoctoral research assistants, there is a more informal 'buddy' system in place. Both pair the mentee with a more senior and experienced member of staff. The School holds a record of all mentors and mentees.

New staff receive a pack of key information including links to the Staff Handbook, containing information on School policies and rules, as well as on flexible working etc. (**O6.1**). They receive additional support by administrative staff, e.g. staff arriving from overseas receive help with opening a bank account.

All staff receive mathematics-specific grant writing support, advice on where to apply for conference funding, and regular emails from the RBDM on grant opportunities and schemes. The 2015 survey highlights that this support is highly valued by Staff and PGR/PDs (97% and 70%, respectively, and including "satisfactory" takes both these figures to 100%).

Staff participate in UoN's Equality and Diversity Training (**O1.5, O5.2**), and other training courses as appropriate. The 2013 and 2015 staff surveys indicate that staff are aware of relevant courses to support career

development offered by UoN (90% and 73%, respectively), and we continue to pro-actively encourage participation (**N3.1**).

(iii) Our undergraduate students have the right to request a female personal tutor. This has only been requested once within the last six years (**O2.2.2**) and was actioned.

Maternity Leave for PGR students:

- For University-funded PGR students, the University's policy is to fund four months of maternity leave. Since 2013, the SoMS has adopted an enhanced policy, in line with that of the Research Councils: All Research Council funded students are entitled to take 6 months of maternity leave on full stipend and a further six months of unpaid maternity leave (**N2.10**). Regardless of the stipend rate normally paid, during a period of maternity leave this rate will be capped at the standard RCUK rate.

- All PGR students, regardless of funding, are able to take up to 12 months away as an 'interruption of study' for maternity purposes.

- In addition to the standard six weeks of paid annual leave PGR students receive per year, PGR students are allowed up to two weeks unpaid paternity leave to support their partners on the birth of a child.

Since 2015, the School offers funding of up to £200 to cover additional childcare costs that arise for PGRs as a result of attendance at academic conferences or workshops, potentially including additional nursery costs and/or a contribution to the costs of the travel of an accompanying family member. The funding is primarily intended to cover care costs for younger children (**N2.10**).

Undergraduate, postgraduate students and staff have access to the University's Employability Services, which give advice on career planning, CV writing and other skills. In addition, the School has a female Careers Advisor who regularly organises careers events jointly with the UoN's Careers and Employability Service (CES) and advertises careers in mathematics both inside and outside of academia. Since 2013, the CES holds weekly drop-in sessions in the School's Atrium, giving career advice to students and checking CVs (**N2.12**).

Since 2011, the School has a female Tutor to Women. Her role is to support and advise undergraduate and postgraduate students (**O2.2.2**). The service has been used regularly by UG and PGRs (around 5 per year).

Since 2013, the School has strengthened the links between outreach and careers, highlighting the wide diversity of careers available to mathematics graduates, many of which are creative, well-paid and family-friendly. The aim of this is both to aid with career progression, and to challenge the stereotype that such a degree is relevant only to research, teaching or finance. In addition to the development of the School's webpages (**N1.1**), a leaflet with related information is distributed to staff/students who undertake outreach activities (**N2.4**).

The School's statistics of students finding employment after the degree show significant improvement from 2013 to 2014: In 2014, graduate prospects (the percentages of those who are studying at PG level or working at graduate / 'professional and managerial' level) are up to 84% from 75% in 2013. In the breakdown of the 2013/14 graduate destinations by gender, females outperform males for positive outcomes and graduate prospects at both first degree and higher degree level.

The School actively encourages women to become members of relevant societies/associations, such as the London Mathematical Society or the European Women in Mathematics Association through one-on-one chats of ASG members with new staff and a Facebook group for female PGRs (23 members).

6. Organisation and culture

(i) Male and female representation on committees

	Committee membership data 2011 - 2015									
	2011/2012		2012/2013		2013/2014		2014/15		2015/2016	
	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀
Executive group	5	0+1	5	0+1	5	0+1	4	0+1	4	0+1
Research board	10+1	1	9+1	1	8+1	1	8+1	1	9+1	1
School meeting	All	All	All	All	All	All	All	All	All	All
Teaching & learning board	6	0	7	0	6	0	6	0	6	0
Programmes & modules committee	-	-	-	-	4	0+1	4	0+1	4	0+1
PG affairs committee	3	0	3	0	3	0	3	0+1	4	0+1
Quality, enhancement & standards	6	0	6	0	6	0	5	0	5	0
UG Learning Community Forum	4	0+2	4	0+2	4	0+2	3+1	0+2	3+1	0+2
PG Learning Community Forum	2	0+2	2	0+2	2	0+2	2	0+2	2	0+2
Resources committee	4	0+2	3	0+2	3	0+2	2+2	0+1	4+2	0+1
Outreach group	1	0+1	2	0+1	2	0+2	2+1	0+1	2+1	0+1
Athena SWAN group	1	3+2	1	3+1	3+1	3+1	3	3+2	4	3+2

Table 7: Staff data indicating male and female representation on committees. Where data is absent, the committee did not exist; `+1' indicates additional members from other job families (viz. School Manager, Research and Business Development Manager, Secretary or Teaching Officer).

The School is not one that is run by large committees, preferring to delegate responsibilities to individuals wherever feasible.

Table 7 shows the male and female representation on the various committees within the School. The gender imbalance within the School is reflected in the committee membership. The School committee arrangements are a positive response to ensuring broad participation in decision-making given the gender imbalance that currently exists. The School does not want to overburden its female members and this arrangement protects their research time.

Wherever possible the School strives to achieve consensus on important matters. The main forum for staff to discuss matters is the School Meeting that meets 3 times per year (support staff meet separately with the HoS to

discuss matters of mutual importance). Sub-committees generally consider large and complex issues first and bring considered views to the Meeting.

Membership of committees is negotiated by the HoS, and informed by individual staff members' PDPR forms and workload data, with a policy of involvement based on equality and fairness.

(ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts**

All Level 4 staff members in Table 3 are on fixed term contracts as they are funded by research grants. In 2011/2012, one of these (male) had a permanent contract in place to start immediately after. One female member of staff at Level 5 has held concurrent permanent and fixed term part-time contracts for the last three years and was then made permanent at 0.8FTE.

In 2011/12, the School had five fixed-term male staff at Level 5 and in 2012/13, four fixed-term male staff at Level 5, covering vacancies/long term illness.

In 2013/14, there was one fixed-term male staff member at Level 7, one at Level 6, and one at Level 5. Two female members at Level 5 and one at Level 4 are on tenure-track fixed-term contracts.

In 2014/15 one Level 5 male fixed-term, there is one fixed-term part time Level 7, one Level 5 fixed-term with follow up permanent contract.

A key issue in the School is the retention of talented (female) researchers and their progression to permanent roles. The enhanced PDPR process (**N3.8**), and mentor/buddy scheme (**O3.1, O3.3, O4.1**), together with a more pro-active approach to career advancement, improved provision of grant-writing and career development support via the Research Facilitator and internal peer review (**N2.11, N3.1, N3.4, N3.9, N3.10**) provide a means to address this.

(iii) **Representation on decision-making committees**

The School has adopted the responsible approach of allocating staff to committees only when necessary, and makes full use of the School Meetings to progress decision making. Currently three female academic staff sit on at least one School committee.

(iv) **Workload model**

After operating an informal workload model for several years, the School has a formal University approved transparent workload model since 2013. Its aim is to give a fair reflection of the work conducted by academic staff involved with research and teaching in the School (**O5.4**). The model contains both tariffed and non-tariffed activities, where the non-tariffed activities are largely self-directed. The tariffs provide a useful comparator for the potentially flexible contributions of the different roles and activities of research and teaching staff.

Pastoral and administrative responsibilities (e.g., chairing the Athena SWAN group, being Tutor to Women or Outreach Officer) are tariffed activities (**N4.2**). The workload model was reviewed in 2014, and some tariffs, like for outreach activities and the role of the Athena SWAN Chair were adjusted to better reflect the workload involved. These are reviewed annually.

Workload data is available online via the School intranet, accessible by all staff. Over time, responsibilities are rotated in line with the skills and experience of staff.

(v) **Timing of departmental meetings and social gatherings**

Core hours have been chosen to be 10:00am - 4:00pm, in order to accommodate child-care issues. All dates and times for School Meetings, exam board meetings etc. are circulated at the beginning of the academic year, allowing staff to plan ahead.
Apart from in exceptional circumstances, meetings are held during core hours; School Meetings usually take place at 1 or 2pm (**O1.1**).

Until 2014, one annual Exam Board Meeting still commenced at 9:00am, due to time pressures associated with entering results onto a central repository. By streamlining procedures, in 2015 this meeting commenced a day earlier at 2:30pm (**N4.4**). Staff with family responsibilities may leave early, if they designate a replacement during their absence. Research seminars are predominantly scheduled within core hours.

School social events take place both within core hours (to maximise attendance of those with family responsibilities), as well as evening events; see **O5.6** and also (vi), below.

The flexibility of the School is recognised in the 2013 and 2015 staff surveys, with a strong majority of those with carer/family responsibilities (61%, 75%,

respectively) responding that these do not impact on their School role (90%, 85%, respectively).

(vi) **Culture**

Women within the School feel very positive about the environment. A female member of staff:

> *"The support given by the School of Mathematical Sciences has been essential in my academic growth";*

a female PhD student comments:

> *"The School, although currently under-representing females, feels welcoming towards them. Experiences in other Schools, where the ratio is closer to 50/50, have not been so friendly."*

This view is reflected more widely, as evidenced in the 2013 and 2015 surveys, in which a clear majority of academic staff rate the atmosphere/working relationships in the School as `good' or `very good' (2013: 81%; 2015: 93%), and 'feel valued by the School' (90%, 95%, respectively). The improvement between the two surveys is a reflection of actions **N4.1-N4.4**, and **N4.7**.

Members of the School meet at both formal and informal social functions: individual research groups organise regular seminars, work groups, and social events (**O5.6**). The common room is a valuable social space. Our PGRs are running a cake club, and several (female and male) PGRs and staff regularly go jogging at lunch times.

External speakers are invited to lunch in order to socialise and network with members of the School. Young female researchers are getting to talk to successful female academics through this practice, which is being particularly well received:

"First of all, I am looking forward to these seminars. They sound amazing and they are all women! How fabulously inspiring. …" ;

from a female PhD student.

Postgraduate students organise welcoming evenings for new PGRs and staff starting with drinks in the common room. Women's afternoon tea happens bi-weekly, and builds upon the success of Women's lunches.

Staff organising meetings or conferences are asked to prioritise female names when building short lists so that women are invited early on in the process (e.g. this has led to a speaker list which is more than 30% female for

Generalized Network Structures and Dynamics, Ohio, March 2016, and the plenary speakers list for the 800 participant 2016 Nottingham European Conference on Mathematical and Theoretical Biology meeting is 50% female).

(vii) **Outreach activities**

To address the undergraduate statistics in Figure 1, and in addition to the outreach already mentioned in Section 3 b (iv), the School provides positive role models for prospective female students (**O2.1**), through its online presence, and marketing materials. The School's undergraduate page links to a page containing student profiles of undergraduate students, the majority of them female. Both online and in our Undergraduate Study Brochure many images of female students are displayed.

For example, the 2014 School Newsletter contains a news item about support for women in science, a female student profile and an article on the research of a female member of staff; and the 2015 PG newsletter includes a substantial piece on women and science and the Athena Swan initiative.

The School's website now has a special page on women in science. Profiles of mathematicians' careers (both academic, and elsewhere) are featured, including videos of our female staff (**N1.1, N2.3**).

Ngoc Tran
MMath Mathematics

"I chose to study mathematics because it was the subject which I enjoyed studying the most and the career prospects after graduation are broad ranging.

The subject is challenging and intellectually stimulating. The staff at Nottingham are ever so approachable and supportive. I feel well trained and looked after here.

The transition to university was OK as a lot of support was given and the material taught was designed to help with the transition.

Mathematics by nature is a challenging subject however it is also very interesting and intellectually stimulating and the careers prospective as well as the transferable skills are highly valued by employers. The staffs are very approachable and supportive; they always try their best to help you with every step of your journey. So work hard, enjoy your course and your time at Nottingham University and take advantage of all the opportunities to gain experience and develop your skills.

Once I have graduated I hope to go into either research or management."

Extract from the Maths Undergraduate web pages
http://www.nottingham.ac.uk/mathematics/prospective/undergraduate/studentprofiles.aspx

Our Undergraduate Ambassador Scheme gives students the chance to work in local classrooms as classroom assistants and gets great reviews from prospective students and parents. Since the majority of its participants are female, this provides valuable mathematical role models for girls (**O2.1**). Furthermore, staff and students participate in a variety of outreach aimed at schools.

Dr Ria Symonds is Area Co-ordinator for the Further Mathematics Support Programme, regularly running events for 6th formers, teachers, and year 10-13 student. Since 2014, we offer annual university taster days for girls in secondary school (**N1.8)** and the UoN Mathematics Society (MathSoc) sends students on weekly visits to five different primary and secondary schools around Nottingham (4 male, 10 female in 2014, 9 male, 12 female in 2015) (**N1.2**).
The School also regularly participates in outreach activities like the Maths Master classes (Ambition Nottingham programme), the Sutton Trust Summer School (an enrichment and widening participation event for bright, disadvantaged A-level students) and the Nottingham Potential Summer School. In 2012, the School was involved in the Teach First mentoring scheme.

Due to the small number of female staff, it is not always possible to have a woman participate in all the outreach activities. To compensate for this, female members are represented in numerous online videos (**O2.1, N1.1, N1.6**) and female mathematicians feature on the Women in Maths Facebook page (**N1.12**).

7. Flexibility and managing career breaks

(i) Maternity return rate

During the last three years, one Anne McLaren Fellow and one Leverhulme Early Career Fellow on a shared post with Biosciences have taken maternity leave. Both returned to work, one on reduced hours.

In the last ten years, one other academic staff member took maternity leave and returned to work on 0.8 FTE.

(ii) Paternity, adoption and parental leave uptake

Requests for formal paternity leave have increased: during the last five years, ten lecturers took paternity leave. One male for family reasons asked for his reduced hours to continue for another year, see also (iii). A few more members of staff made informal arrangements like working from home. All returned to work. No parental and adoption leaves were requested in the last seven years. One male has taken full month Paternity Leave as part of the new Shared Leave Scheme.

(iii) Numbers of applications and success rates for flexible working by gender and grade

The University's Flexible Working Arrangement Policy allows staff with children aged 17 or under, or a disabled child under the age of 18, and other caring responsibilities to request flexible working arrangements. Under this policy, two male lecturers worked four days a week for one semester, and two academic years, respectively, to fit work around childcare issues.

Flexible working arrangements are also supported when staff are coming back after a long period of ill health.

(iv) Flexible working

Staff have the right to request flexible working according to the University's Flexible Working Arrangement Policy. There were three applications under this policy in the last two years, sec 7 (iii), and none in the previous six years.

All staff are allowed to work from home one day per week during term time, unless teaching, administrative or supervision duties interfere. Timetables are drawn up with the aim of providing staff with at least one day a week free of lectures. These at home days are entered in an online diary accessible to all, where other absences (conference attendances etc.) are also recorded, to help the School run smoothly.

In addition, where possible, teaching allocation and timetables accommodate family/caring commitments (and to date this has always succeeded) - the School Manager maintains this information, and feeds it into the central timetabling system.

All these options are explained in the staff handbook which is available online. The 2013 and 2015 Staff Surveys indicate that the majority of staff are aware of the relevant flexible working policies and where to find them (2013: 58%; 2015: 61%) (**O6.1**).

(v) **Cover for maternity and adoption leave and support on return**

The maternity and adoption leave policies that the School has operated for many years have been updated to reflect best practice within the University and the mathematics HE community in 2014; additionally, steps have been taken to publicise these schemes more effectively (**O6.1, N3.7**).

The standard UoN maternity leave, parental support (including paternity leave) and adoption leave policies are supplemented by the further procedures for staff absent for more than 16 weeks, that cover the hand-over of responsibilities, a return-to-work plan, and strategic financial support for those in need of research funds and maternity pay for research fellows (when not covered by the grant funding body). A good example of our support for phased return to work is that of Kirsty Bolton, who has returned to work at 0.4FTE over three days, and has requested (and been agreed) a change now to 0.4 FTE over two different days.

In addition to improved maternity provision for PGRs (see Career Development sec 5 (iii) and **N2.10**), each PhD student has two supervisors, so that the absence of a supervisor does not create any disadvantages for the student or supervisory staff.

[4984/5000]

8. Any other comments

To be more visible and to encourage women to pursue a career in academia, female staff use social media (**N1.7, N1.10, N11, N1.12, N1.12**). Inspirational talks, interviews and portraits are recorded and put online (**N2.3, N1.1**).

Our initial idea to apply for funding to have an artist make portraits of female mathematicians and make an exhibition to show and tour is logistically hard to implement and has been adjusted: Funded by the School, we hired a video journalist and filmed a dozen videos instead, the first six were launched online last autumn. All were broadly advertised to societies and associations worldwide. Links to the videos are imbedded for instance in the webpages of the LMS, EWM, and the Associations of Teachers.

Professor Ivette Fuentes obtained funding to make a short film (**N2.5**).

Professor Ivette Fuentes and Dr Susanne Pumpluen launched and now administer several Facebook groups and Dr Susanne Pumpluen runs a page profiling female mathematicians:

- The group "Women in STEM at UoN" has 146 members (**N1.7**). It is now an open group and linked to the WinSET pages

- The "Women in Maths" page (**N1.12**) is used to profile female mathematicians to fight stereotypes, make them more visible, and to highlight connections between mathematics and arts and music. It has over 2500 likes (all original, the page was not boosted). Its best performing post reached over 15200 people in over 40 countries. The page is liked for instance by the page of Deutsche Telekom Stiftung, the UK Mathematics Trust, Math Scholar, ULB-Faculté des Sciences, Marketing of Scientific and Research Organizations, Scientific Journal, TUM Fakultät Mathematik, Deutsche Mathematiker-Vereinigung. Videos can be posted there to make them accessible to a broader audience. We plan to use it to create impact for female researchers and to give them a platform to introduce themselves and their research. Readers come from all over the world, the top countries represented are US, UK, Italy, India, Pakistan and Germany.

- The groups "Women in Maths" and "Women in Physics" were formed in 2014 and 2015 (269 and 158 members) and are used to exchange examples of good practice, information etc. (**N1.11).** Feedback on the Women in Maths page and group from a member:

"I like the efforts that people are making to notice world-changing women scientists. I also like and applaud efforts – like those of this FB page to develop a support community not only for those who are world-changers but also for those of us who are part of a pack."

The Facebook group “Alice: Women in Quantum Theory” (179 members) is open to all women, from student to professor. The idea is to provide support, information and mentorship. Members are encouraged to share their recent papers/successes and the best ones will be posted in other physics groups by the administrator (**N1.10)**.

[465/500]

New Action Plan 2016-2019

Current award and date awarded: Bronze award, April 2011, extended by one year in April 2014 submission round.

- ***indicates a priority action.**
- **Some actions have already been completed or worked on during the extension year after the last submission. We have also added some new actions during the extension year. To indicate progress we use a traffic light system - green for mainly complete, amber for ongoing, and red for long term goal.**
- **As requested on 18 February 2016, we removed completed actions (and merged some others). We kept the original numbering from the submission. Thus some actions referred to in the main text now are not listed anymore in the plan. Specifically 1.9, 2.8, 2.12, 3.5, 3.6, 3.7, 3.12, 3.14, 3.17, 3.18, 4.1, 4.2, 4.3, 4.4, 4.6 are complete and 2.1, 2.3, 2.5, 3,9, 3.16, 4.7 have been merged with 1.4, 1.1, 1.6, 3.4, 3.4 and 4.8 respectively.**

1. General Issues:

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
1.1*	Low online visibility of School's women in maths events and promotions; School's online image not attractive to potential female students and staff.	'Women in Science' webpage added to School's webpages, and staff profiles, including videos high-lighting female mathematicians' careers in academia. Since 2014, the 'Women in Science' and a 'Disability and Diversity' page is linked visible to School's homepage to attract female PGT / PGR students and ECRs. Women in Science page contains series of videos filmed in May 2014 and March 2015, useful links to direct traffic to it, e.g. upcoming events etc., and since 2015 to Facebook page "Women in Maths".	Main work completed by early 2016 and then subsequent maintenance. Add profiles high-lighting female mathematicians' careers outside of academia.	Outreach officer, Marketing Officer, Web Liaison Officer, monitored by the Athena SWAN group (ASG).	Applications from female UG/PGR/ PGTs/ECRs potential staff reviewed annually. Targets reached by 2019. Plan further action if needed.	Maintain percentage of female PGTs above national average and increase it to 50%. Keep percentage of female PGRs above the national average and increase it to 40% (current baseline hovers between 24%-30% for three years). Increase percentage of female UGs to at least 40% (the current baseline for UGs hovers between 35%-37% for three years now).
1.2*	Lack of visible female role models in mathematics for UG students, and for	Since 2013, the students' Maths Society (MathSoc) runs a "parent" scheme for new first year students	Work with Maths Society, continue a "parent" scheme and send students to	ASG, MathSoc, "Women in Maths'' ambassadors.	First events organised by ``Women in Maths'' ambassadors in spring 2016.	Increase attendance at talks and other events organised by the ``Women in Maths'' ambassadors (baseline= 20 students).

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
	primary and secondary school children.	(around 80 students in it) to aid their settling in and provide course advice). Since 2014, MathSoc sends students to secondary schools in Nottinghamshire (4 male, 10 female in 2014; 9 male, 12 female in 2015), and since 2015 also to primary schools. In 2015, two women in maths ambassadors were elected by MathSoc for the first time. The School provided funding for their first event. Female PGR went to an outreach event in Mansfield.	primary and secondary schools in Nottinghamshire. Establish "Women in Maths'' group of UGs within the Mathsoc in 2016 and help them plan events with female UGs/PGRs and staff geared towards female UG students, and with their old secondary schools. Two "Women in Maths" ambassadors will be elected each year by MathSoc, planning events.		Establish funding arrangement with MathSoc and provide them with better access to the School's governance structure. Review of new "Women in Maths" UG scheme in 2017, feedback from students. Scheme firmly established and running by 2019.	Increase percentage of female UG/PGRs to 40 % by 2019.
1.3*	In-house statistics show low numbers of female seminar speakers.	Seminar organisers were encouraged to invite female speakers and keep records in 2014 and 2015. Every seminar/conference speaker invited to present at the School gets offered to give a remote talk, if carer responsibilities do not allow him or her to travel. So far this has not been used. Autumn term 2014: 47 male and 7 female speakers (13%). Spring term 2015: 74 male and 15 female speakers	Require seminar organisers to invite more female speakers and keep annual records. Add report on numbers as standing item on Research Board agenda.	Seminar organisers, Research Board.	Ongoing, with percentages reviewed annually. Plan further actions if necessary.	Ensure at least 40% female speakers per year.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		(17%). Autumn term 2015: 23 male and 13 female speakers (36%).				
1.4	Low numbers of female UGs taking up summer research bursaries (which often lead to PhD research). Better uptake of bursaries will help increased UG to PG conversion:	Collect data on UG summer research bursaries. Number of female students taking up summer research bursary: 2011:3; 2012:5; 2013:2; 2014:6; 2015:5. Margaret Jackson bursaries to support female UG research established in 2014. Two bursaries awarded each in 2014 and 2015. Feedback: a female PhD student says: "I did a summer internship at the University of Nottingham in statistics which was funded by EPSRC between my second and third year of my undergraduate degree, which let me see what doing a PhD was like and encouraged me to do a PhD.''	Collected data annually. Monitor if students go for PhD after bursary. Advertise summer research bursaries to UGs and review advertisement material (use online checker for for hidden bias). Involve Tutors to suggest bursaries to gifted students, with an emphasis on pro-actively approaching suitable female UGs, to submit one male and one female candidate. Collect feedback from UGs. Keep awarding one or two Margaret Jackson bursaries per year.	School Manager, Internship Officer, Tutors.	Ongoing, with numbers reviewed annually. Plan further actions if necessary to make bursaries attractive to female students.	Aim to have 40% female students for bursaries by 2019. Increased percentage of female students studying for a PhD, aiming at 40% on average by 2019. Maintain very positive feedback.
1.5	Low awareness of equality and diversity issues by staff, and low uptake of training.	Unconscious bias training at Staff Away Day in September 2015 (60 staff were trained). Two workshops on "Women and Men: Careers in	Annual workshop on topic related to equality and diversity in mathematics. Regularly include	Staff Development Officer, HoS, School Manager.	Workshop annually in March (November in 2016, as speaker Dr M Mazzocco was not available in the spring).	Increase awareness of E&D issues and Athena SWAN activities, measured in percentages, in staff surveys. Monitor attendance at workshops, plan further action if attendance needs to be

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Academia." (The workshop talk by Dr L Walling in March 2015 was filmed, is on YouTube, and was advertised to a broad audience via social media.) Encouragement of staff to take online courses in Equality and Diversity.	equality and diversity training in staff development, e.g. additional training in how to achieve a better gender balance at conferences at annual Staff Development Away Day. Require staff to take online E&D courses (by informing newly arrived staff, non-attenders chased by AS group and HoS) and monitor uptake.		Uptake of equality and diversity training monitored once a year, with goal to increase uptake of online training to 100% by 2019.	increased. Increase percentage of uptake in online courses to 100% (current baseline=28% of academic staff).
1.6	Low visibility of female mathematicians working in academia; low awareness of the general public on what it means to do research; on connections between art, music and mathematics, the creative side of maths.	A Numberphile video was filmed by one female member of staff in 2014 (>560 000 views). Dr Walling's talk on women and ambition was filmed, funded by the School (>800 views). Prof Ivette Fuentes and the artist Benjamin Arizmendi have started a collaboration. Their work combining arts and mathematics was showcased at Liquids in Vienna on 5th December 2015. Prof Ivette Fuentes filmed videos on her research for a general audience in December 2014, is video	Female member of staff will give presentation on women in science to Mexican secondary school. Develop more projects linking art and maths, including videos, posters, with short profiles / interviews of women in maths. Script for independent film ready, project going forward, but now with a new team including Spanish researchers, postponed because of different choice of	ASG, Prof Ivette Fuentes.	Dr Bindi Brook will provide profile for MRC careers pathway toolkit, an interactive toolkit to assist researchers in working out the next steps they want to take in their career by 2018. All new videos will be advertised on the "Women in Maths" FB page by the end of 2016. Film to be completed after return of Prof Fuentes to Nottingham (after 2017)	Raise percentage of female UGs to 40% by 2019. Success is measured by likes, post reach, comments etc. on the "Women in Maths" Facebook page and group (new actions 1.11 and 1.12) which allow the School to advertise events and videos to a wider audience once published. Success of videos measured by views: Maintain high number of websites of societies and organisations where the "Women in Maths" videos are embedded/are advertised (currently: European Women in Mathematics (Organisation); ScienceGrrl, Nottingham Chapter; the LMS Women in Maths page; the Association of Teachers of Mathematics; the Further Mathematics Support Programme; The American

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		interviewed by EPSRC and gave TED style talk in Spain in Summer 2014. Humorous sketch by illustrator A Meyer on women in maths is used as logo for FB page and group. Second series of videos profiling female mathematicians (including UGs, PGRs, PDRAs) were funded by the School and completed in December 2015. Short film with Lion Cannes Nominee photographer, film-maker and scientist A. Dragan, started in 2013.	filmmaker and temporary move of main organiser to different university overseas.			Women in Mathematics Association; the American blog Math-Frolic.) Success of film measured by reviews, number of views.
1.7	Missing platform to exchange ideas and promote activities on equality and diversity among women and men at UoN.	The Facebook group "Women in STEM at UoN" was launched in 2013. It was made an open group in November 2014 and it is now linked to the UoN's "Women in Nottingham" homepage, to create traffic. (Its content is now also visible to people not registered on Facebook.)	Maintain and develop Facebook group. Use it to increase awareness of equality and diversity issues and collect relevant links, general public can use it as source for relevant literature/articles.	Dr Susanne Pumpluen and Prof Ivette Fuentes	Reach 200 members by 2019.	Measure success by numbers of members in group, posts and likes, comments to page (97 members at time of last submission in April 2014, 146 in December 2015).
1.8	Low percentage of female secondary students choosing mathematics at university.	University taster days for girls in secondary school: First "Celebrating Women in Mathematics Day" targeting girls taking KS4 maths on 24 June 2014 with 136 participants (80% female).	Run annual Celebrating Women in Maths events for secondary school girls. Such an event consists of a series of engaging maths workshops run by female presenters to	Outreach Officer	Annual Celebrating Women in Maths events for girls in secondary school. Attendance and feedback reviewed annually.	Increase uptake from both students and teachers, increase number of events. Maintain very positive feedback from students and teachers.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Student feedback from 2014 event: “I learnt a lot, engaging, interesting and the teacher was lovely”; “it was a good challenge and I really enjoyed it”; “… very enjoyable and easy to understand.” Teacher: “The day was easy to access for all students and a great confidence builder”; “Fantastic delivery of workshops. Engaging and made the students really think about maths.”) In June 2015, the Minster School was invited to a Girls Maths Day at the University of Nottingham. 30 of the Minster’s brightest girls attended a day at University observing maths in action and getting careers advice.	celebrate women's contribution to mathematics. Partition outreach events and include female component.			
1.10	Women working in quantum theory express lack of network/visibility/no sense of community; lack of communication channels for women in their area.	Facebook group “Alice: Women in Quantum Information” open to all women, from students to professors, to provide support, information and mentorship, and help mend that leaky pipeline. Group was launched by Prof Ivette Fuentes in 2014, more than 100 members added overnight.	Members are currently building a website with a directory of women working in quantum information (including bios, links to talks), stats on female representations at conferences, etc.	Ivette Fuentes	Attract more members to reach around 250 by 2019. A new website with a directory of women working in quantum information by 2017.	Membership numbers (179 at time of submission) and posts; initiatives arising from it; feedback. Maintain very positive feedback. Number of visitors to the new website.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Members are invited to post links to their latest papers, which get sponsored and posted in bigger groups by senior members if they are good. Examples of positive impact of this group: Alice #1: "My boss asked me if I knew of someone working in field X to invite for a conference. I said 'sure, let's check the women's group!' We found a couple of female researchers, whom he invited." Alice #2: "Hey, you're in the sisterhood too! I didn't know we were so many." Alice #3: "After reading some articles posted on Alice, I started noticing that girls were much more insecure at oral exams. Being aware of it, and of our own biases, helped us give fairer marks."				
1.11	Lack of communication channels for an instant exchange of information for mathematicians and mathematical physicists who want to help to fix the leaking pipeline.	Facebook groups "Women in Maths" and "Women in Physics" to exchange information and network, administrated by Dr Susanne Pumpluen and Prof Ivette Fuentes, launched in 2015. Example of positive feedback: on the "Women in	Increase membership numbers and advertise groups more widely. Skype chat with year 12 pupils from Kingsbridge College in Devon becomes annual event.	Dr Susanne Pumpluen and Prof Ivette Fuentes.	Attract more members to reach around 350 and 250 by 2019 Ongoing monitoring of feedback and implementation of resulting actions.	Membership numbers (currently 269 and 158) and posts. Maintain very positive feedback.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Maths" page and group from a member: "I like the efforts that people are making to notice world-changing women scientists. I also like and applaud efforts – like those of this FB page – to develop a support community not only for those who are world-changers but also for those of us who are part of the pack." Contacts made in the "Women in Maths" group, led to the School's female PGRs organising a Skype chat with year 12 pupils from Kingsbridge College in Devon, to inspire them to continue with mathematics or at least consider it by breaking the stereotypes of maths being a male subject.				
1.12	Low visibility of female mathematicians both in academia and out all over the world; resulting lack of role models; stereotype threat; lack of understanding what it means to do research in mathematics or to study mathematics.	"Women in Maths" Facebook page established in November 2014, profiling female mathematicians to fight stereotypes and fix the leaking pipeline. Page contains ongoing references to connections between arts, maths and music and that one does not have to be "brilliant'' to succeed.	Maintain page, post profiles regularly and advertise page to relevant societies and initiatives.	Dr Susanne Pumpluen.	Reaching 5000 page likes by the end of 2017.	Numbers of likes, post reaches, press, page statistics, comments on posts.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Currently having over 2800 likes, the page gained over 200 likes in three days when launched, it is not boosted. Most readers are from UK, US, Italy, India, Pakistan, Germany. Top performing posts reached over 15000 people. The page is for instance featured in an online article by Good Housekeeping Magazine February 2015, the Lindau Blog (in German and English) and liked by associations like the UK Maths Trust, the Association of German Mathematicians etc., see main document. The blog entry mentioning it on the Lindau blog by journalist Stefanie Hanel mentioned the Akademianet database which only has two female UK mathematicians on it, subsequently, its link was sent to the LMS and the Industrial Mathematics Association IMA by members of the ASG to alert them to this problem.				

2. Students

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
2.2*	Low visibility of actions concerning Athena SWAN/equality and diversity among PG students, low awareness of the Athena SWAN charter; low visibility of female staff for PG students.	Article on women in maths and AS work appeared in 2015 PG newsletter. This included a feature on Women in Science in the 2015 newsletter, a female member of staff as well as female student profiles in the 2015 PG brochure. Both contain many pictures of female role models in academia.	Regularly include information on Athena SWAN in annual brochures.	Marketing Manager	Obtain feedback on awareness on Athena SWAN by PG students in focus groups etc. annually.	Increase awareness of Athena SWAN among PG students to 100% by 2019, monitored by surveys and in focus groups annually.
2.4*	UGs and applicants report lack of information on possible careers for mathematicians.	Link careers and outreach via online materials and maths careers leaflet, regularly featuring women. Since 2014, outreach page on School pages linked visible to homepage. Possible careers for mathematicians highlighted in different profiles on "Women in Maths" Facebook page since 2014. MathSoc event in spring 2015 with female alumni.	Possible careers for mathematicians will be highlighted in different profiles on "Women in Maths" Facebook page. Alumni will regularly be invited to School for talks, making sure both female and male alumni are equally well represented. Online material reviewed for bias.	Careers Officer, Outreach Officer, CES, MathSoc.	Applications from female UGs reviewed annually. Plan further action if needed.	Increase of percentage of female UGs to at least 40% by 2019 (the current baseline for UGs hovers between 35%-37% for three years now).
2.6	Staff are lacking media and communication skills; missing skills for outreach via social media, how to	Media and communication skills training of staff : In December 2014 one female and one male member of staff participated in workshop offered by	Ongoing offer and promotion of media and communication skills training of staff to improve on skills necessary for outreach.	Staff Development Officer, individual staff.	Staff will regularly be invited to these events and encouraged to participate.	Increase attendance at events. Increased use of social media, and videos by staff. More female staff appearing in online videos and on social media.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
	behave in interviews etc.; female staff less visible in these media and reluctant to use them.	marketing.	E.g., UoN marketing regularly offers training for staff for using social media to promote their research and gives advice on how to deal with trolling on Facebook etc. , or the course offered by the Royal Society			Measured in videos produced, and likes, views, comments in Facebook and Twitter feeds.
2.7	Low pool of visible female role models at Open Days and UCAS Days.	Involve female PGRs / postdocs in outreach activities. The videos filmed in March 2015 involved UGs, PGRs and postdocs. Open Days have more female than male UG helpers for many years now.	Invite PGRs and students to give a short biography for posting on the "Women in Maths" FB page which is read all over the world. A post can reach over 12000 people. Share profiles on School sites.	Outreach Officer, Careers Officer.	Ongoing, with feedback reviewed in 2017.	Increased percentage of female UG /PG students, feedback collected from visit days.
2.9	Lack of opportunity for female PGR students to socialize, network and exchange experiences, get advice; to meet female post docs, ECRs and other staff.	From 2014 onwards, the School hosted women's lunches for first year and final year undergraduate students and PGRs. The weekly women's lunches for PGRs were opened to all UGs both male and female interested in learning more on what it means to do a PhD in November 2014. Several UG students attended (around 3 each lunch).	Since autumn 2015 we have switched to a different format of teas twice a week following a consultation with female PGRs who preferred that time. This has yielded higher attendance (10 PGR students on average).	School Manager and PGRs.	Ongoing, with feedback on format by PGRs and UGs reviewed in Autumn 2016. Plan different format if needed.	Increased attendance and awareness of UGs and PGRs. Attendance at lunches/teas, monitored regularly. More UG / PGRs staying in academia.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		Pizza lunch for all female first year students and PGRs in March 2015. The pizza lunch was attended by only a few UGS (unclear why).				
2.10	PGRs report lack of clarity on, and support for, taking maternity leave.	Extended maternity leave for PGRs with 6 months' paid leave from 2014 onwards for all School funded students. Uptake to date: none.	Monitor uptake and feedback of PGRs taking extended maternity leave.	School Manager.	Ongoing, with feedback reviewed in 2017.	100% of PGRs report awareness of maternity policy. PGRs taking maternity leave report satisfaction with support before, during and after leave.
2.11	High numbers of female PGRs leaving academia.	From 2014, we increasingly encouraged our PGRs to attend the training courses run centrally by UoN, via Facebook groups and email invitations. Half-day course run by Research Facilitator in Feb 2015 on "Grant and Fellowship application writing" (20 PGRs attended). Media training course for PhD students in April 2015 (12 PGRs attended).	Provide training to PGRs to aid future Postdoc or faculty positions. Regularly offer a course to PGRs, giving advice on best approaches to applying for positions in academia.	Research Facilitator, PGR Student Advisor, CES.	Monitor annually.	Fewer PGRs leaving academia. Increase uptake of training courses.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
2.13	UGs would like to see more attractive School Postgraduate Day and meet PGRs.	We explored how to make the School's Postgraduate Day more attractive: in 2015, posters from current PGRs displayed in atrium for the first time.	Postgraduate Day is currently being restructured.	HoRGs.	Annually in November.	Increase percentage of female PGRs to 40% (current baseline hovers between 24%-30% for three years).
2.14	UGs report little contact between first year and later year students.	Peer Assisted study support (PASS) developed in partnership with the students in 2014/15, incorporating problem classes for first years that are given by older students. Over 150 applications for first intake starting September 2015.	Ongoing, trying to have balanced selection of male / female PASS leaders so students have female role models.	Director of Teaching and Learning.	Annual review. Plan adjustment to scheme in autumn 2016 and subsequent years, as required.	Annual feedback from students and leaders, number of applications to PASS scheme, including student surveys Percentage of attendance at PASS maintained as high throughout the year. Positive feedback. First year students report having more visible role models, the higher year students feel they belong to the School, more female PGRs.
2.15	Low attendance of students, PGRs and postgrads at the yearly LMS Women in Maths day and other external events.	Since 2015: Offering students, PGRs and postgrads funding to attend the yearly LMS Women in Maths day and advertise it broadly. ASG approaching students individually to advertise LMS Women in Maths day. In 2014 this was taken up by one postgrad, in 2015 none went, some UG students mentioned as a reason that the timing of the event was bad (in their Easter break).	Ongoing. Pro-active advertisement of events. Allocate budget and choose highest performing male and female student to go to LMS summer school.	HoS, ASG.	Ongoing, attendance reviewed annually. Monitor numbers, plan further actions if necessary	Increased attendance at events.
2.16	Lack of financial support for PGRs to cover additional	Childcare fund of up to 200 Pounds per PGR to cover additional childcare costs	Monitor uptake and feedback. Advertise scheme regularly.	HoS.	Ongoing.	100% of PGRs report awareness of policy, measured in survey.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
	childcare costs that arise from attending academic conferences or workshops.	that arise from attending academic conferences or workshops available since 2015. Not taken up so far by anyone.				Feedback.

3. Supporting and advancing female staff

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measures
3.1*	Low numbers of postdocs/ fellows and research staff attending careers workshops from Professional Development Unit and Graduate School; pipeline issues within School.	Since 2014 all staff are encouraged to attend workshops during annual PDPR meetings.	Staff Development Officer regularly sends out email reminders to staff to attend careers workshops from Professional Development Unit and Graduate School.	Staff Development Officer.	Ongoing. Numbers reviewed annually.	Higher numbers attending courses, more postdocs remaining in academia, more promotions.
3.2*	Few female staff at Level 4.	Pro-active approach to increase female research staff appointments via internal and external Fellowship schemes since 2014: since 2014, the school has supported 1 female applicant every year for the University Anna McLaren research. The School now has four women on fellowships with tenure track.	Continued use of internal and external Fellowship schemes, advertised on extra page on the school website.	HoS, HoRGs.	Ongoing. Percentage reviewed annually.	Raise percentage of female staff at level 4 from current baseline of 20% to 40% by 2019.
3.3*	Low numbers of female applicants and hence low	Pro-active approach to recruitment since 2011: openings are advertised	Ongoing. Review approach to	HoS.	Ongoing, numbers reviewed annually.	Increased numbers of female applicants and percentage of females shortlisted.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
	numbers on shortlists.	directly to female academics working in the relevant research area (and exploiting links to the Women in Mathematics Committee of the London Mathematical Society). HoS monitors shortlists. Since 2014, the School also invites female academics to give research seminars around the time of job advertisement in order to encourage applications. Appointment of Dr Susama Agarwala (September 2015, Assistant Professor), Dr Susan Franks (senior visiting fellow 2015-2017 0.5 FTE), and Dr Rachel Nicks (starting Aug 2016, Assistant Professor).	open market recruitment. Review of numbers regular item on agenda of School's Executive group.		Plan further action if necessary.	
3.4*	Lack of knowledge about the promotion process and of cv review; lack of women applying for promotions.	Pro-active approach to promotions since 2014: annual CV review for all staff; encourage staff who have been on the same grade for several years to submit CV for consideration / feedback by School Promotions Group (SPG). In a 2015 survey (on CV review by the School promotion group) 65%	Ongoing.	HoS, SPG, Staff Development Officer.	Annually in July.	Promotion of more female staff. Increase awareness of CV review among all staff to 100% by 2019. Monitor awareness of promotion process and increase it to 100%.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		(20/31) of respondents rated this as useful or very useful; 49% of the staff were aware of it. Improve publicity of promotions process within staff to enhance career progression. Ivette Fuentes promoted to professor in 2015. One female member of staff put in application for promotion in 2015 (outcome still open).				
3.8	Lack of clarity on how the PDPR leads to rewards.	Stronger encouragement to discuss promotion through PDPR process since 2015, and clearer documentation.	Ongoing.	HoRGs, HoS.	Each Spring email reminder to staff. Annual review of ratings.	Promotion of female staff. Percentage of female staff with higher PDPR ratings.
3.10	Low uptake of grant workshops by ECRs; researchers report low awareness of help available when applying for a grant.	Research Facilitator offers one-on-one mentoring, excellent service in place. There is also a formal, internal review process pre-application for large grants in place now. 25 attended grant workshop in 2015. An EPSRC first grant subsequently secured by one participant	Further improve support and mentoring of academic staff in preparing grant / fellowship applications, increased use of internal peer reviews.	HoS, HoRGs, Research Board.	Monitor attendance at workshops, plan further action if needed.	Increase awareness of available options for all staff to 90%-100%. Improved success rates with grant applications.
3.11	Lack of female conference/ workshop speakers; lack of awareness	Since 2015 staff is encouraged to ask to give a virtual talk if they are not able to attend a conference	Regularly circulate option among staff, both informally by Chair of Athena SWAN and	ASG.	Ongoing, uptake reviewed annually.	Raising awareness among the mathematical community that there is the option of remote talks.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
	among conference organisers of the fact that invited speakers cannot always attend, but might be able to participate remotely.	because of family responsibilities or similar. Possibility to accept invitations for talks staff might not be able to honour otherwise. Uptake: one female member of staff in 2015 (remote talk at workshop in Portugal).	officially in School Meetings.			Number of remote talks offered/ given by 2019.
3.13	Lack of financial support for staff to cover additional childcare costs that arise from attending academic conferences or workshops.	Childcare fund of up to 200 pounds per staff to cover additional childcare costs that arise from attending academic conferences or workshops. Policy has been circulated via email by School Manager. Taken up by one member of (male) staff.	This policy is regularly circulated via email by School Manager.	School Manager.	Ongoing, feedback reviewed in 2017.	Uptake by staff. Monitor awareness of staff via focus groups and in staff surveys. Increase awareness to 100% by 2019.
3.15	Several recent studies show that student evaluations can be biased against female lecturers.	The School's peer-review of teaching scheme is re-launched in 2014/15: Forms may be used to support promotion applications. Peer-review evaluations provide additional evidence of good teaching.	Staff feedback currently being collected. Put additional peer review in place with staff having special teaching qualifications.	Staff development officer.	Ongoing, feedback reviewed in 2017.	Increased awareness among staff on potential bias in evaluations reported in staff surveys/ focus groups to 90-100%. A fairer assessment of good teaching. Positive staff feedback.

4. Culture

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measures
4.5	Lack of clarity on how to organise family-friendly conferences at UoN.	ASG produced info leaflet with a collection of places like children-friendly restaurants, outdoor playgrounds, a Denz indoor playground, etc., all walking distance or close to University Park.	Advertise leaflet to staff regularly. Raise awareness of staff who organise conferences. Addition of leaflet on family -friendly conferences at UoN to School's webpages on conferences in 2016. Liase with UoN childcare facilities about possibility of offering spaces to children of visiting researchers. Monitor awareness of staff clarity on how to organise family-friendly conferences at UoN. Start monitoring gender of conference participants. Plan further actions if necessary.	ASG.	Review leaflet in 2017, ask for feedback from conference organisers and participants.	Increase percentage of female participants of conferences/ workshops held at UoN, monitor numbers. At least 40% female participants at conference on average in 2019. 100% of staff organising conferences at UoN report awareness of how to offer more family-friendly conferences.
4.8	Low numbers of female speakers at conferences and workshops.	Staff organising meetings or conferences are asked to prioritise female names when building short lists so that women are invited early on in the process. The "QCC 2015" had 25	Ongoing.	All staff organising conferences.	Ongoing, annual review.	A higher number of female conference speakers, reaching over 40% on average in 2019.

	Issue/Rationale	Actions already taken	Actions for Future	Responsible	Timeline/Milestones	Success Measure
		speakers, 5 of them female. The 2015 meeting on "Generalized Network Structures and Dynamics" will have 30% female speakers. Comment from organiser (Coombes): "…we prepared a long list of desirable speakers - giving some thought to female names. When building our short and reserve list we then simply prioritised female names to the former so that they would be invited early on in the process. In this way we have naturally achieved a 30% representation of female speakers - so easy!"				

What else happened since the last submission in 2014?

All outreach activities by staff are properly tariffed in the new workload model since autumn 2014 when it was reviewed. Tariff for Athena SWAN activities quadrupled within workload model from autumn 2014 onwards.

The School strategy plan 2015 includes the goal: “Increase the proportion of female academic staff’’.

Jobs are advertised more broadly on European Mathematical Society, AMS, European Women in Mathematics pages.

Appointment panels in School at lecturer level and above have designated Athena Swan Champion as member since 2014.

The School offers a quiet, private space for staff that return to work after maternity leave to pump breast milk. Feedback: “I have been using a space within the School to pump breastmilk to leave with my son at nursery since returning to work. The office is more than adequate for my needs and I am able to use it as and when I require.”

Academic partners of staff members can get a visitor status at the School and support and assistance with grant and fellowship applications.

Two suggestion boxes, one in the UG study room and one in the staff common room, and a dedicated email address, to collect student feedback anonymously.

The offer to get careers advice and feedback on CVs is taken up regularly. The School’s statistics of students finding employment after the degree show significant improvement from 2013 to 2014: In 2014, graduate prospects are up to 84 from 75 % in 2013. (Graduate prospects are percentages of those who are studying at PG level or working at graduate / ‘professional and managerial’ level.)

In the breakdown of the 2013/14 graduate destinations by gender, females outperform males for positive outcomes and graduate prospects at both first degree and higher degree level (although only by very small numbers at higher degree level).

ASG has a budget since 2013. The ASG obtained additional funding by the School for activities, e.g. for video series.