



Department Application Bronze and Silver Award



ATHENA SWAN BRONZE DEPARTMENT AWARDS

Recognise that in addition to institution-wide policies, the department is working to promote gender equality and to identify and address challenges particular to the department and discipline.

ATHENA SWAN SILVER DEPARTMENT AWARDS

In addition to the future planning required for Bronze department recognition, Silver department awards recognise that the department has taken action in response to previously identified challenges and can demonstrate the impact of the actions implemented.

Note: Not all institutions use the term 'department'. There are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' can be found in the Athena SWAN awards handbook.

COMPLETING THE FORM

DO NOT ATTEMPT TO COMPLETE THIS APPLICATION FORM WITHOUT READING THE ATHENA SWAN AWARDS HANDBOOK.

This form should be used for applications for Bronze and Silver department awards.

You should complete each section of the application applicable to the award level you are applying for.

Additional areas for Silver applications are highlighted throughout the form: 5.2, 5.4, 5.5(iv)

If you need to insert a landscape page in your application, please copy and paste the template page at the end of the document, as per the instructions on that page. Please do not insert any section breaks as to do so will disrupt the page numbers.

WORD COUNT

The overall word limit for applications are shown in the following table.

There are no specific word limits for the individual sections and you may distribute words over each of the sections as appropriate. At the end of every section, please state how many words you have used in that section.

We have provided the following recommendations as a guide.

Department application	Current	Silver
Word limit	11,967	12,000
<i>Recommended word count</i>		
1. Letter of endorsement	500	500
2. Description of the department	500	500
3. Self-assessment process	996	1,000
4. Picture of the department	1,998	2,000
5. Supporting and advancing women's careers	6,498	6,500
6. Case studies	999	1,000
7. Further information	476	500

Name of institution	University of Bath	
Department	Department of Physics	
Focus of department	<u>STEMM</u>	AHSSBL
Date of application	27 November 2018	
Award Level	<u>Bronze</u>	Silver
Institution Athena SWAN award	Date: April 2017	Level: Bronze
Contact for application <small>Must be based in the department</small>	Dr Stijn Wuyts	
Email	s.wuyts@bath.ac.uk	
Telephone	01225 38 4598	
Departmental website	http://www.bath.ac.uk/physics/	

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT **500/500 WORDS**

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

An accompanying letter of endorsement from the head of department should be included. If the head of department is soon to be succeeded, or has recently taken up the post, applicants should include an additional short statement from the incoming head.

Note: Please insert the endorsement letter **immediately after** this cover page.

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27th November, 2018.

Athena SWAN Silver Award Application: Department of Physics, University of Bath

It gives me great pleasure, as acting Head of Department and Dean of the Faculty, to support this application from the Department for an Athena SWAN Silver Award. I was heavily involved in the appointment of Prof. Carole Mundell as Head of Department in 2016, whose outlook was fully aligned with the aspirations of the Athena SWAN programme. Her success as a scientist has recently been recognised in her appointment as the Chief Scientific Advisor at the Foreign & Commonwealth office. Being a member of the Department myself, I assumed the role of acting Head on 1st October 2018. I see it as an imperative that the Department's initiatives to enhance equality, diversity and inclusion, which Prof. Mundell has overseen, continue to be built upon.

Since achieving the Bronze Award there has been a strong focus on change within the Department to support equality of opportunities around career development. The Career Progression Advisory Group was set up to identify and support candidates coming through to promotion and was to enhance the active mentoring scheme already in place. The Group has proved successful in the support it has provided but, in light of feedback, will continue to evolve to work in a more transparent manner. The Network of Women in Physics, an undergraduate initiative backed by Departmental support, provides wider career advice to students and early career researchers, and the PhD peer mentoring scheme initiated as a Bronze Action ensures a quicker integration within the Department. The Faculty instigated a review and re-launch of the Staff Development and Performance Review process, with which the Department was fully engaged. This is being rolled out to all job families. The Department introduced an updated induction and support process for new staff, which gives clearer guidance on expectations supported by a staff handbook. As part of the University's campaign against sexual harassment, Prof. Mundell championed "Bringing in the Bystander" training to all Departmental staff. The Department strongly supports Faculty-wide networking events such as *From PhD to ProVC*, which is aimed at early career researchers.

I fully support the new action plan outlined in this application. I will work closely with DSAT, both as acting Head and Dean, in ensuring its implementation. I have a clear expectation that the new Head of Department will be committed to the agenda of change initiated and developed for this application. The review of current structures is already underway and all committees will have well defined terms of reference and membership. All positions of leadership within the Department will be openly advertised, as has been the case for the recent appointments of Deputy Head and Director of Research. The Department will continue to work closely with the Faculty to

develop the career structure for our technical staff. The University has recently signed up to the “Technician Commitment” to provide visibility, recognition and career development for all technical staff.

The information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the Department.

Yours sincerely,



Professor Nick Brook
Dean of the Faculty of Science
Acting Head of the Department of Physics

[500 words]

2. DESCRIPTION OF THE DEPARTMENT 500/500 WORDS

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

Please provide a brief description of the department including any relevant contextual information. Present data on the total number of academic staff, professional and support staff and students by gender.

The Department of Physics pairs a thriving research environment with high quality education. We were ranked joint 13th in REF 2014, with 91% of our research graded 4*/3* (world-leading/internationally excellent). Our research-led Physics education was ranked in the top ten nationwide for course satisfaction in the Guardian University Guide 2018, and receives high acclaim from academic and industrial employers alike.



Figure 1: Physics students cooperate on an industry project (University of Bath online publicity materials).

We are committed to providing an inclusive study and workplace culture, as evidenced by our **2015 Athena SWAN Bronze award** and 95% of surveyed Department members supporting the Athena SWAN principles. Since our 2015 submission, the Department has grown significantly. We now count 506 undergraduate (UG) students, 50 postgraduate research (PGR) students, and 53 members of academic and research staff (Figure 2). This represents growth of 43%, 56% and 13% compared to 2013/14 in these categories, respectively. Female representation hovers around the UK average for UG students in Physics (23%), slightly above for PGRs (30%) and slightly below for staff (17%). We recruited 11 Research Fellows and new Lecturers since 2013/14 (55% female) and believe this gender-balanced intake reflects the impact of our **Bronze Actions** to improve recruitment processes, a pro-active role model in a female HoD and improved support for Early Career Researchers. The latter ranges from a tailored mentorship scheme to a series of Early Career Lunches, Staff Development Performance Reviews and internal/external training opportunities, paired with a Faculty-wide networking event on career progression. PGRs enjoy improved support evidenced by an increased training uptake (Figure 22) and favourable appreciation of the Department's support in their career progression (Figure 23).

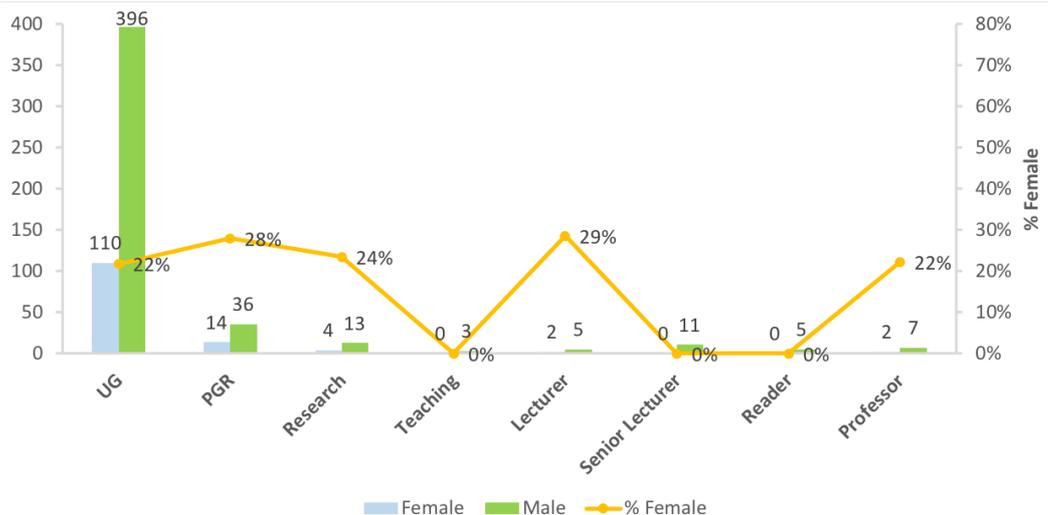


Figure 2: Total number of students and academic and research staff in the department 2016/17 (HESA data year end July 31st).

Our recent growth allowed the establishment of a new Astrophysics Group, which alongside the existing Nanoscience, Photonics and Theory groups captures the bulk of research activities within the Department (Figure 3). A new curriculum stream, Physics with Astrophysics, complements the existing Physics and Maths & Physics teaching strands. Complementing scientific meetings and seminars at the group level, regular department-wide research lunches, colloquia and teaching- and research-themed Away Days enable engagement across group boundaries. The academic life is further enriched by a weekly coffee in a newly refurbished collaborative networking space and more elaborate socials, such as the Christmas party and annual Physics Welcome dinner. Our offices and labs form a single coherent footprint centred around Physics Square with its adjacent networking space, which serve as focal points for the everyday life of Physics students and staff.

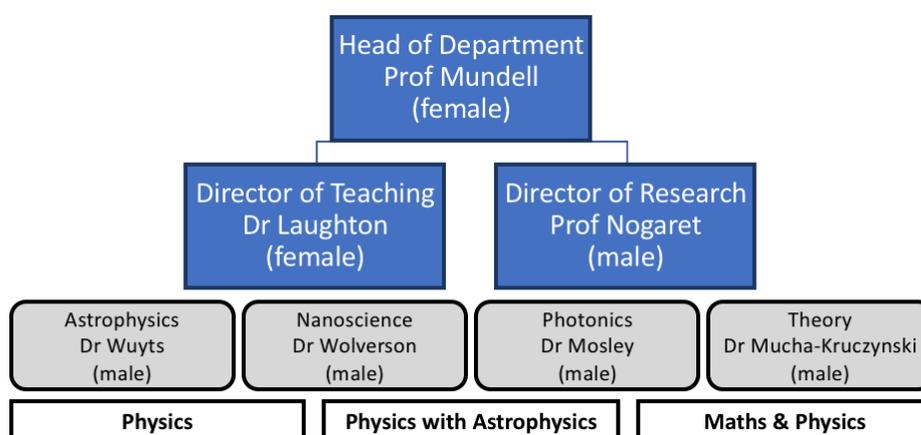


Figure 3: Structure of the Department of Physics with operational leads (rectangles), research themes (rounded rectangles), and three educational strands (bottom). A complementary structure in terms of committees is presented in Section 5.6.

Our organisational structure features a Head of Department assisted by Directors of Teaching and Research, and a Departmental Executive which currently has 29% female representation. A full layout of departmental committees in support of research, teaching, equality & diversity and career progression is presented in Section 5.6.

Our academics are supported by a team of 16 Professional & Support Staff, half of whom are female. Their functions can be divided broadly into technical support and administration. While most are line managed at Faculty level, for any practical purpose they form an integral part of the Department. They are therefore included in our submission.

[500 words]

3. THE SELF-ASSESSMENT PROCESS 996/1000 WORDS

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

(i) a description of the self-assessment team

The Department Self-Assessment Team (DSAT) has 7 female and 6 male members, representing the **full range of grades and job families** present within the Department. The current DSAT has been in place since September 2017. For continuity, we retained two members of the previous DSAT committee who composed the 2015 submission and had monitored the progress against our **Bronze Actions**. Continuity was further provided by a handover and subsequent consultations between the present chair and the previous one, which included valuable guidance regarding remit and management of the DSAT team as well as the status of its actions.

DSAT's organisational structure has been left open, such that two of the present members have joined on their own initiative shortly after the present team was established, either because they felt they could contribute individually or because their research group valued representation on the committee.

As such, the team is composed of professional & support staff (both admin and technical), a postgraduate research (PGR) student, a postdoctoral research associate (PDRAs) and University Prize Fellow¹, as well as all ranks of permanent academic staff. It features **representation from, and through it bi-directional communication with, the Staff-Student Liaison Committees (SSLC, both UG and PGR), the Research Committee, and the Departmental Executive Committee**. Included in the team are several roles who contribute to an inclusive department, such as the UG admissions tutor, the early career representative and the department Equality, Diversity & Inclusion (EDI) officer.

A direct link to the senior management team within the Department is ensured through several members of the Departmental Executive who serve on DSAT. As a USAT member and advisor to the diversity committee of the Institute of Physics our HoD further makes sure the Department's EDI activities are connected into the wider University and beyond.

¹ The Prize Fellowship scheme initiated by the University of Bath represents a prestigious fellowship attracting rising research stars and fast-tracking them onto a permanent position at Bath after their first two years. The Physics Prize Fellow recruits are 2 males and 2 females.

	Caroline Bertemes: PGR student, member of PGR Student-Staff Liaison Committee		Ian Thompson: Postdoctoral research associate, engaged in Bath Academic Career Academy
	David Bird: Professor, former Dean of Science		Carolin Villforth: Lecturer, early career representative, organiser early career lunches, member of PGR Student-Staff Liaison Committee, member of Departmental Executive Committee
	Adelina Ilie: Lecturer, winner of a competitive place in the AURORA women-only leadership development programme		Isabel Wells: Professional & Support Staff: technicians representative
	Joanna Łucyszyn: Professional & Support Staff: administrative support representative, department coordinator		Nigel Wilding: Professor (left summer 2018 to become Head of School in Bristol)
	Gary Mathlin: UG admissions tutor, co-organisator UCAS/Open Days, member of UG Staff-Student Liaison Committee, senior tutor (tutorials and student well-being)		Stijn Wuyts: Senior lecturer, DSAT chair, Equality, Diversity & Inclusion and ethics officer, member of Departmental Executive Committee
	Josh Nunn: Royal Society University Research Fellow and Reader in Photonics		Anita Zeidler: Royal Society Dorothy Hodgkin research fellow, transitioning to Lectureship
	Kristina Rusimova: Postdoctoral research associate, transitioning to University Prize Fellow, engaged in Bath Academic Career Academy		

(ii) an account of the self-assessment process

DSAT meets every month, and communicates with the wider department during monthly departmental meetings where EDI features as a standing agenda item. The latter is also the venue where occasionally external speakers are brought in to highlight campus-wide initiatives such as the #NeverOK campaign to prevent sexual harassment.

DSAT's remit can be broken down as follows:

- **Collect data** on staff & students
- **Analyse data** on staff and students objectively with as goal identifying the impact of past actions and the need for future ones.
- **Disseminate** the findings during department meetings.
- **Review and monitor** the implementation of our 2015 Bronze Actions.
- Review the departmental committee structure.
- Review good practice from other departments and organisations (e.g., as shared during Equality & Diversity Network meetings).
- **Inform colleagues** of Equality & Diversity events across campus (e.g., Annual Athena SWAN lecture, "Inspiring Women" talk series, NWP conference, Faculty Networking Event) and **signpost** relevant guidance (e.g., resources on supporting students in distress).
- Lead a **department wide consultation on the Action Plan** (Departmental meeting October 2018).

The data presented in this document are obtained from the University's central Office of Policy and Planning, Human Resources, Staff and Researcher Development teams, Placement team and the Department's own records, and includes the benchmarking data from UK Higher Education Institutes.

A robust interpretation of quantitative trends involving female percentages is, in a field such as Physics, often limited by small number statistics. We adopt the standard statistical method of bootstrapping, relying on random sampling with replacement, to indicate the degree to which apparent trends may be affected by small sample sizes. A large error bar on, say, the female percentage of PGR students at Bath therefore doesn't reflect that we do not know how many female and male PGR students our Department hosts (we know it exactly), but rather that the female percentage would change sensitively due the arrival or departure of just a few PGRs.

DSAT further composes and conducts the "Department culture survey" as part of a regular system of monitoring. The 2014 survey serves as a reference baseline. Our latest June 2018 round of surveys was the first to poll also the professional & support staff (PSS) within our department (75% response rate). Response rates from PGRs, PDRAs and academic staff were 60%, 54% and 75%, respectively. Polling related to culture of the department and research groups, career progression and engagement in outreach activities. More specific *ad hoc* polls for feedback were carried out following the Early Career Research lunches (13 respondents; response rate 100%) and the 2018 Network of Women in Physics (NWP) conference (21 returns; response rate 47%). Additionally, UG students are consulted separately through the National Student Survey and via representation on the UG SSLC, a member of which serves on DSAT.

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

Following the 2018 Athena SWAN submission, DSAT will meet quarterly, focussing primarily on monitoring of progress against its newly formulated **Silver Actions**. In doing so, it will monitor newly incoming data, report to the department meeting to assure delivery and ownership of the actions formulated, and ensure that ongoing actions are embedded in the department culture. DSAT representatives on the UG and PGR SSLC as well as the Early Career representative overseeing the organisation of Early Career Research lunches will liaise on the implementation of Athena SWAN principles and relevant actions with those respective groups.

Meanwhile, we will continue our periodic Department culture survey, supplemented by focus groups where relevant (as done, e.g., in the form of an ad hoc working group on work-life balance in response to the 2014 Department culture survey).

In line with the time-restricted roles introduced by DSAT's review of committee structure (**Action 1.3**), membership of DSAT will be refreshed periodically (e.g., as new staff take on the role of UG admissions tutor, early career representative, equality & diversity officer et cetera). Core principles and actions will be implemented into existing roles to ensure they are passed on.

[996 words]

4. A PICTURE OF THE DEPARTMENT 1998/2000 WORDS

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

4.1. Student data

If courses in the categories below do not exist, please enter n/a.

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

n/a

(ii) Numbers of undergraduate students by gender

Full- and part-time by programme. Provide data on course applications, offers, and acceptance rates, and degree attainment by gender.

Over the course of the review period, our UG student body has grown by 43% reaching a total of 506 in 2016/17 (Figure 4).² In 2015/16, entrance criteria were increased to A*AA and an additional 'Physics with Astrophysics' stream of the curriculum was introduced. 'Physics with Astrophysics' (28% F) appears to be a more popular choice to female students compared to the standard Physics stream (23% F), in line with the nationwide trend documented by the Institute of Physics. 'Maths & Physics' shows a similar attraction to female students (28% F). Averaged over the full review period,

² External UG data are from the Higher Education Statistics Agency (HESA) physics cost centre with year ending July 31st. Where indicated, internal data from the Department or, e.g., Faculty placement team are included. HESA data, including benchmark data for the Physics HE sector, represent Full Time Equivalents rounded to the nearest 5, explaining minor differences with respect to the internal data based on academic year headcounts.

female students are slightly more likely than men to enroll in a BSc rather than MPhys/MSci programme (by 3%), albeit with significant year-to-year variations.

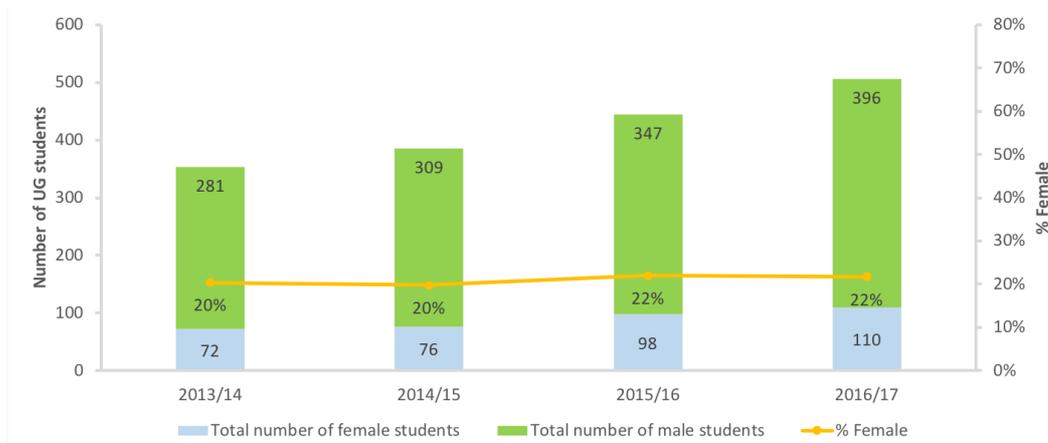


Figure 4: Total number of undergraduate (UG) students in the Department by gender (bars) and % female (line) by academic year.

Thus far, the above programme changes did not introduce a significant change in the overall female representation at the UG level, which at 22-23% (Figure 5, Table 1) remains consistent with female representation among UK school students taking Physics A levels, but above the 16% taking Maths and Physics A levels. Figure 6 illustrates how this feeds through to the offers made and eventually, with increased year-to-year scatter due to small number statistics, the number of acceptances. The latter is in line with HESA statistics on UK Physics 1st year entrants.

Table 2 illustrates that there are no gender biases in our recruitment process with women and men equally likely to be made offers, and 2015/16 apart, equally likely to accept those offers.

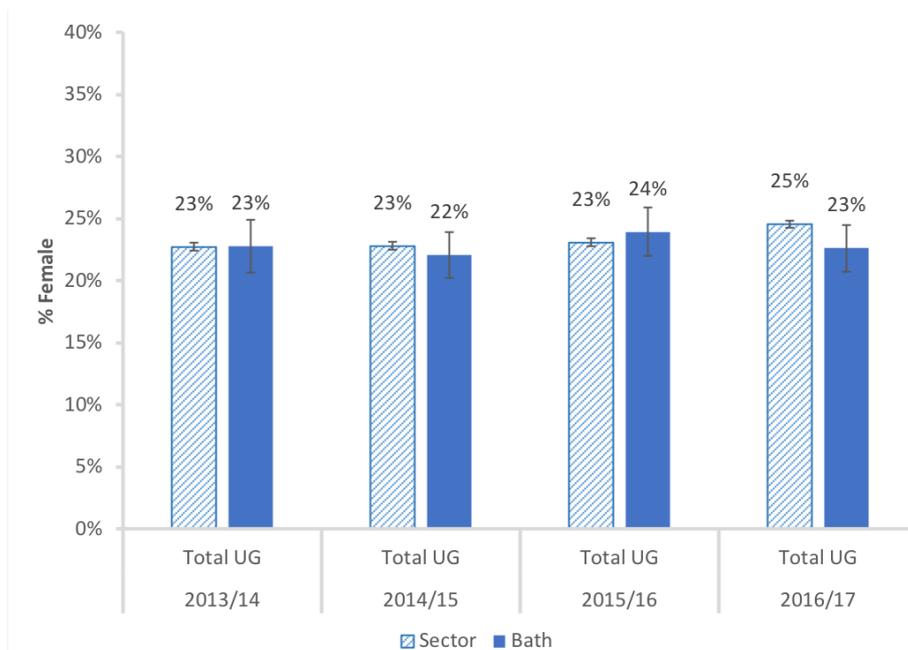


Figure 5: Percentage of female undergraduate students in the Department of Physics at the University of Bath compared to other Higher Education Institutions across the sector (HESA data; slight differences with respect to Figure 4 stem from HESA rounding rules). Throughout, error bars are derived from bootstrapping as explained in Section 3(ii).

HESA Cost Centre: Physics		University of Bath			All HEIs		
		Total	Full time	Part time	Total	Full time	Part time
2013/14	Female	90	90	0	4170	3945	225
	Male	305	305	0	14090	13395	695
	Other	0	0	-	5	5	-
	Total	395	395	0	18260	17,340	920
	%F	23%	23%	-	23%	23%	24%
	%M	77%	77%	-	77%	77%	76%
2014/15	Female	95	95	0	4320	4120	200
	Male	335	335	0	14595	13980	615
	Other	0	0	-	5	5	-
	Total	430	430	0	18925	18105	815
	%F	22%	22%	-	23%	23%	25%
	%M	78%	78%	-	77%	77%	75%
2015/16	Female	115	115	0	4500	4330	170
	Male	365	365	0	14970	14405	565
	Other	0	0	-	10	10	-
	Total	480	480	0	19480	18745	740
	%F	24%	24%	-	23%	23%	23%
	%M	76%	76%	-	77%	77%	76%
2016/17	Female	120	120	0	4995	4530	460
	Male	410	410	0	15320	14340	980
	Other	0	0	0	10	10	0
	Total	530	530	0	20325	18885	1440
	%F	23%	23%	-	25%	24%	32%
	%M	77%	77%	-	75%	76%	68%

Table 1: Benchmarking data for undergraduate students in Physics at the University of Bath and across all Higher Education Institutions (HEI).

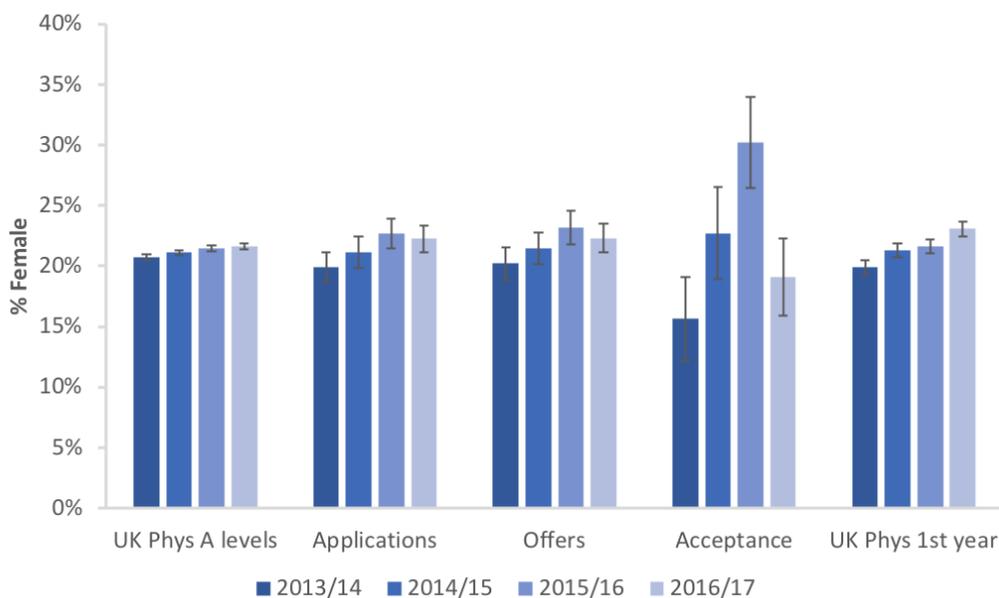


Figure 6: Female percentage of applications, offers and acceptance to a University of Bath Physics undergraduate programme, bracketed by benchmark data on the female percentage of UK Physics A level students (left, data from the Institute of Physics) and UK Physics 1st year undergraduate students (right, data from HESA).

While Figure 6 does not show evidence for a leaky pipeline, the overall female representation in the discipline remains low. Our Department's commitment to improve gender representation in the subject is evidenced by many of our staff and students contributing actively to tackling the imbalance at the source, both through outreach activities in schools (Section 5.6) and through our approach to recruitment. All our promotion materials are fully gender balanced, meaning that imagery in brochures of the Physics Department have a 50:50 gender ratio rather than drawing randomly from the department's constituents. Likewise, the Physics web pages and contributions to the University's 50th anniversary promotion film were composed with an eye on prominence of active women physicists. Female representation of the Department during Applicant Visit Days and Open Days is 36% among UG and PGR students, and 25 - 40% among staff (depending on whether PSS are included or not). Leaflets of the Network of Women in Physics are made available during all Applicant Visit Days.

		Apps	Offers	Accepts	Offers/Apps	Accepts/Offers	Accepts/Apps	
UG: Physics	2013/14	Female	185	170	18	92%	11%	10%
		Male	745	671	97	90%	14%	13%
		% F	20%	20%	16%			
	2014/15	Female	220	208	30	95%	14%	14%
		Male	821	762	102	93%	13%	12%
		% F	21%	21%	23%			
	2015/16	Female	244	218	48	89%	22%	20%
		Male	832	722	111	87%	15%	13%
		% F	23%	23%	30%			
	2016/17	Female	294	257	30	87%	12%	10%
		Male	1,028	895	127	87%	14%	12%
		% F	22%	22%	19%			

Table 2: Applications, offers and acceptances to study Physics by gender and by academic year.

Turning to degree attainment, care is taken to make the assessment process as fair and bias-free as possible. Exams are marked anonymously. For the evaluation of research projects, marking is distributed between several assessors and moderated by a chair. We evaluated the marks awarded over all BSc and MPhys research projects carried out in 2016/17, finding a median mark of 70.5% for female graduates compared to 69.0% for male graduates, with a consistent standard deviation of 5%. Figures 7, 8 and Table 3 present statistics on the overall degree attainment. Female students are marginally more likely to obtain a 2.1 degree or higher, at the 2σ level.

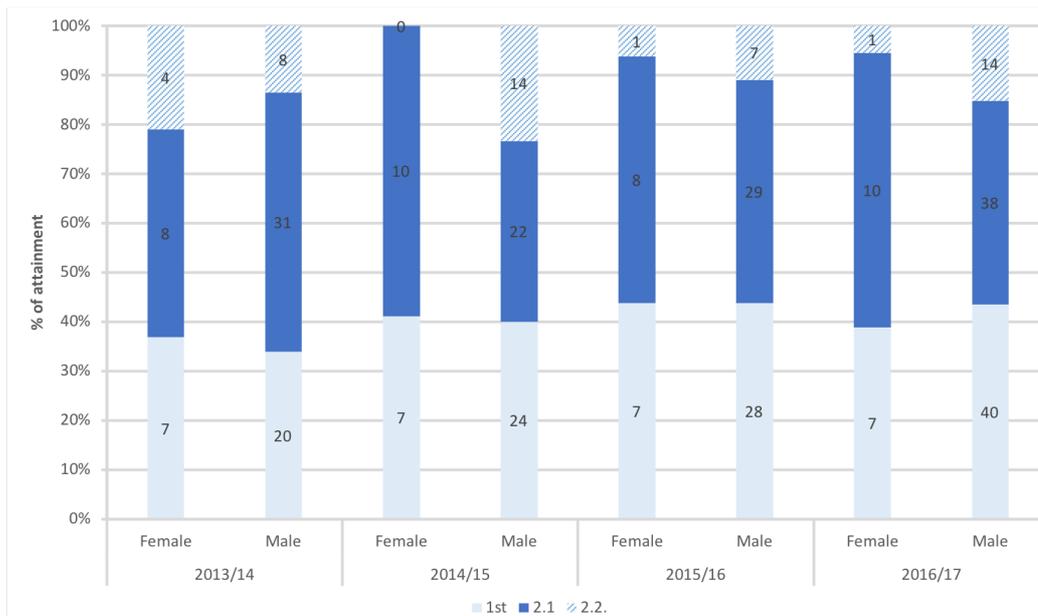


Figure 7: Undergraduate degree attainment by gender and academic year.

Physics: UG DEGREE ATTAINMENT		1st	2.1	2.2	3rd	Total
2013/14	Female	7	8	4	1	20
	Male	20	31	8	0	59
	Total	27	39	12	1	79
	%F	35%	40%	20%	5%	25%
	%M	34%	53%	14%	0%	75%
2014/15	Female	7	10	0	3	20
	Male	24	22	14	2	62
	Total	31	32	14	5	82
	%F	35%	50%	0%	15%	24%
	%M	39%	35%	23%	3%	76%
2015/16	Female	7	8	1	0	16
	Male	28	29	7	5	69
	Total	35	37	8	5	85
	%F	44%	50%	6%	0%	19%
	%M	41%	42%	10%	7%	81%
2016/17	Female	7	10	1	0	18
	Male	40	38	14	1	93
	Total	47	48	15	1	111
	%F	39%	56%	6%	0%	16%
	%M	43%	41%	15%	1%	84%
Overall	Female	28	36	6	4	74
	Male	112	120	43	8	283
	Total	140	156	49	12	357
	%F	38%	49%	8%	5%	21%
	%M	40%	42%	15%	3%	79%

Table 3: Undergraduate degree attainment in Physics by gender and by academic year.

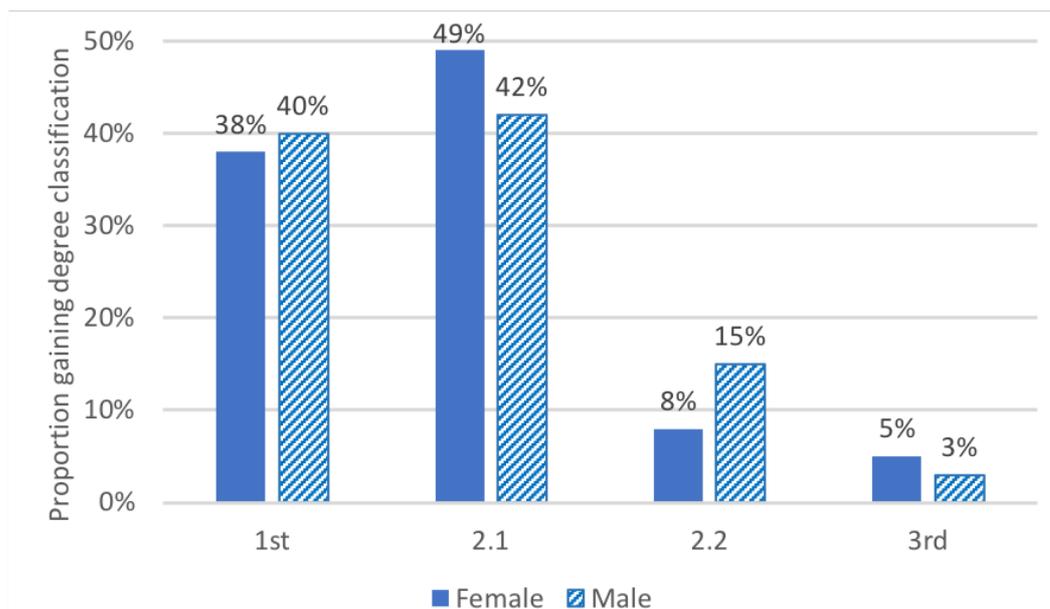


Figure 8: Degree classifications by gender summed over the full review period.

Two strands of the UG Physics programme that enhance the student experience and employability are the addition of a study year abroad and a research and/or industry placement. The latter enjoys a large uptake by Physics students, and it is not uncommon for new graduates to receive job offers from their former placement employer. In this light, we investigated the uptake of these opportunities by gender, averaged over 2013/14 - 2018/19 (Table 4). With 35% females among 40 study abroad students, women make significantly more use of this opportunity. In general, the scheme has gained popularity in recent years irrespective of gender. Women are also significantly more likely to make use of placement opportunities, accounting for 27% of 289 placements organised over the review period.

Gender	Total cohort	Study abroad scheme		Work placement	
		Number	Proportion of cohort	Number	Proportion of cohort
Female	126	14	11%	77	61%
Male	410	26	6%	212	52%

Table 4: Uptake of study abroad and professional placement schemes over the period 2013/14 – 2018/19 by gender.

Finally, we investigated the intersection of gender and race, based on the 99% of 506 UG students in our Department that disclosed their ethnicities. Among female UGs, 4% are black or minority ethnic (BME). 3% of male UGs enrolled in Physics at Bath are BME. HESA benchmarking data reveal 15% of female and 13% of male UGs in Physics UK-wide are BME. We conclude that irrespective of gender the UG population at Bath is less diverse than in Physics UK-wide. Other than displaying the diverse backgrounds of our staff and students during Open Days, in brochures and on the departmental website (**Action 6.1**), a dedicated Public Engagement Working Group will coordinate our efforts in widening participation at the school level (**Action 6.2**).

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

n/a

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

Full- and part-time. Provide data on course application, offers, acceptance and degree completion rates by gender.

Postgraduate research (PGR) student numbers have increased by 56% since 2013/14 (Figure 9), in line with the University's policy to grow its research base. The female proportion of PGRs has decreased slightly, from 31% in 2013/14 to 28% now, although remains above the UK sector wide level of 23 – 25% (Figure 10; Table 5).

Academic registry records indicate 21% of our female and 6% of our male PGR students are BME, compared to 7% of female and 6% of male PGR students in Physics UK-wide. Unlike the situation for UG students, the ethnic diversity of our PGR cohort is therefore in line with (or in the case of female PGRs above) the UK average.

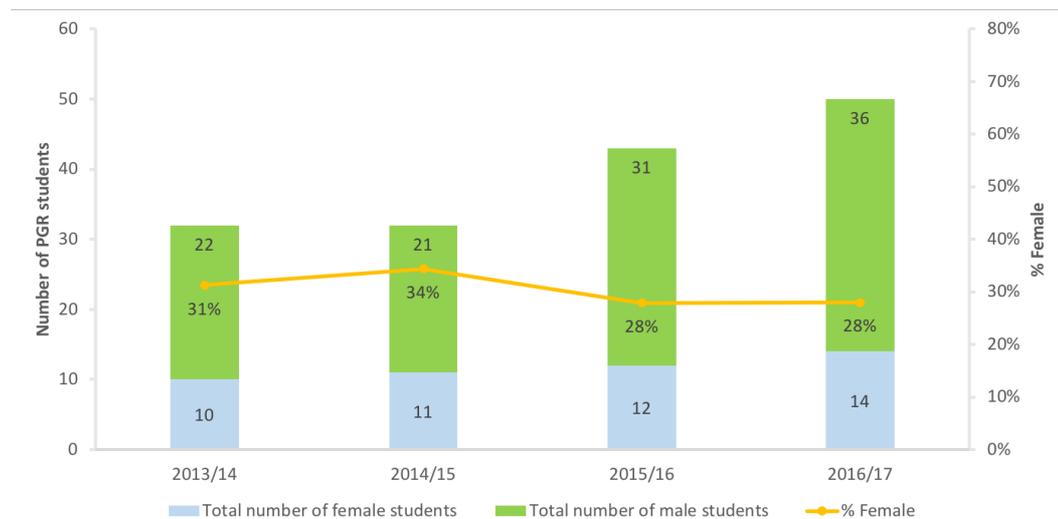


Figure 9: Total number of postgraduate (PGR) students in the Department by gender (bars) and % female (line) by academic year.

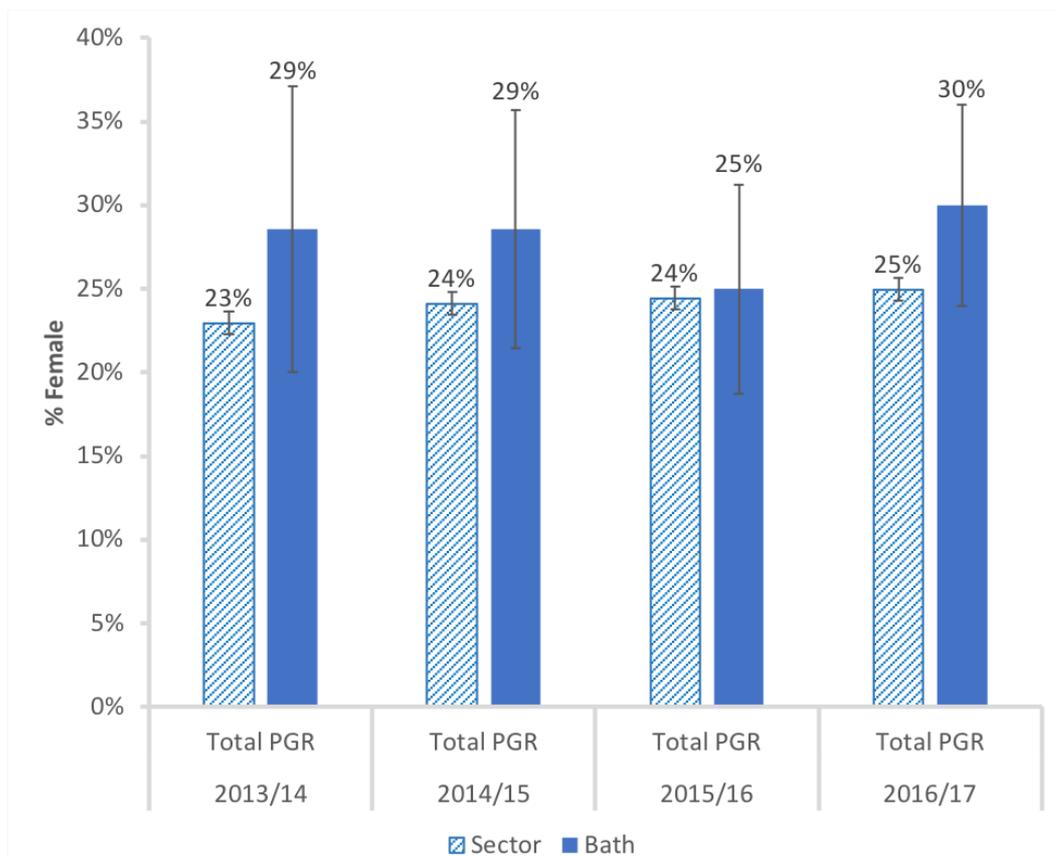


Figure 10: Percentage of female postgraduate students in the Department of Physics at the University of Bath compared to other Higher Education Institutions across the sector (HESA data).

HESA Cost Centre: Physics		University of Bath				All HEIs			
		Total	Full time	Part time	Other	Total	Full time	Part time	Other
2013/14	Female	10	10	0	0	845	760	20	65
	Male	25	20	0	5	2845	2550	55	240
	Total	35	30	0	5	3690	3,310	75	305
	%F	29%	33%	-	0%	23%	23%	27%	21%
2014/15	Female	10	10	0	0	935	840	15	80
	Male	25	20	0	5	2935	2580	60	295
	Total	35	30	0	10	3875	3430	75	375
	%F	29%	33%	-	0%	24%	24%	20%	21%
2015/16	Female	10	10	0	0	980	870	20	90
	Male	30	25	0	5	3030	2670	60	295
	Total	40	40	0	5	4010	3,540	85	385
	%F	25%	25%	-	0%	24%	25%	24%	23%
2016/17	Female	15	15	0	0	1010	905	85	25
	Male	40	35	0	5	3025	2700	265	55
	Total	50	45	0	5	4045	3610	80	350
	%F	30%	33%	-	0%	25%	25%	106%	7%

Table 5: Benchmarking data for postgraduate research students at the University of Bath and across all Higher Education Institutions (HEI).

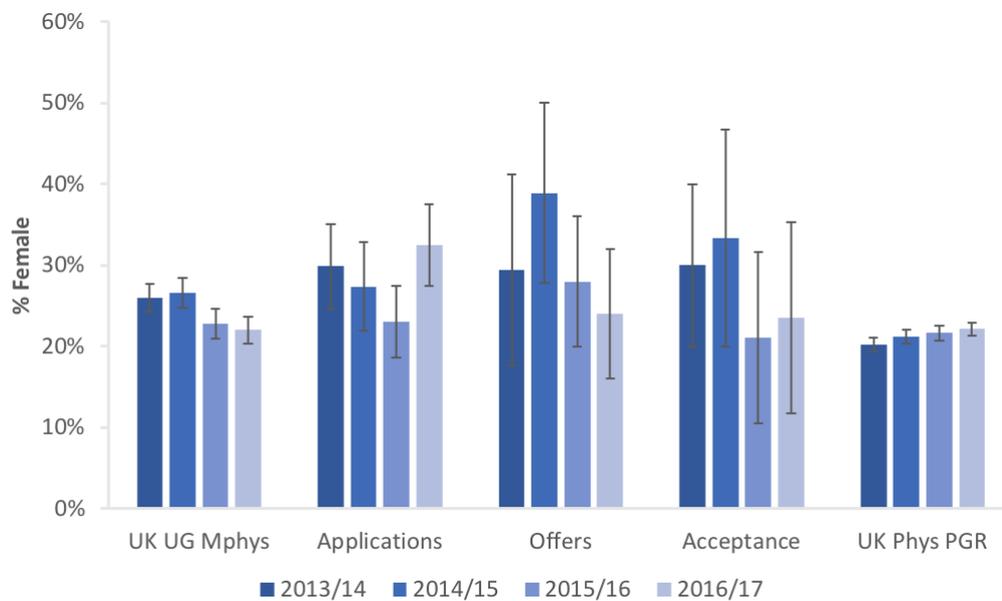


Figure 11: Female percentage of applications, offers and acceptance to a University of Bath Physics postgraduate programme, bracketed by benchmark data on the female percentage of graduating UK Physics MPhys students (left) and UK Physics PGR students (right, data from HESA).

Figure 11 depicts the pipeline from graduates to UK UG programmes in Physics to applicants to Bath PGR studentships advertised in Physics, the respective offers made and corresponding acceptances (see also Table 6). On the right, the nation wide female percentage among starting PGRs in Physics is shown for reference. We find that women and men are equally likely to receive offers and accept those offers, modulo year-to-year fluctuations due to small number statistics. Throughout the recruitment process, selection panels are always composed of at least one woman and at least one man. Averaged over the review period, female representation among accepted positions in Bath exceeds that of the nation wide average in the discipline.

		Apps	Offers	Accepts	Offers/Apps	Accepts/Offers	Accepts/Apps	
PGR:Physics	2013/14	Female	23	5	3	22%	60%	13%
		Male	54	12	7	22%	58%	13%
		% F	30%	29%	30%			
	2014/15	Female	20	7	5	35%	71%	25%
		Male	53	11	10	21%	91%	19%
		% F	27%	39%	33%			
	2015/16	Female	21	7	4	33%	57%	19%
		Male	70	18	15	26%	83%	21%
		% F	23%	28%	21%			
	2016/17	Female	26	6	4	23%	67%	15%
		Male	54	19	13	35%	68%	24%
		% F	33%	24%	24%			
	Overall	Female	90	25	16	28%	64%	18%
		Male	231	60	45	26%	75%	19%
		% F	28%	29%	26%			

Table 6: Applications, offers and acceptances to enroll in the Physics postgraduate research programme by gender and by academic year.

Physics: PhD submission rates (*)		Submitted within 4 years	Submitted after 4 years	Not submitted (in time)	Not submitted (out of time)	Total	% submitted
2010/11	Female	3	1	0	0	4	100%
	Male	5	0	0	0	5	100%
	% F	38%	100%	-	-	44%	-
2011/12	Female	2	0	0	0	2	100%
	Male	8	1	0	0	9	100%
	% F	20%	0%	-	-	18%	
2012/13	Female	3	0	0	0	3	100%
	Male	4	0	0	1	5	80%
	% F	43%	-	-	0%	38%	-
2013/14	Female	2	1	0	0	3	100%
	Male	5	0	0	0	5	100%
	% F	29%	-	-	-	38%	-

Table 7: Thesis completion data for full-time postgraduate research students (PGRs) by gender and by academic year. *This cohort analysis looks at the entry points, instead of the year of degree completion.

Table 7 indicates that PhD submission rates in Physics are consistently high. Over the full review period only one (male) PhD student failed to submit by the final deadline. The latter was supported by the supervisory team to conclude the project with an MPhil degree.

(v) Progression pipeline between undergraduate and postgraduate student levels

Identify and comment on any issues in the pipeline between undergraduate and postgraduate degrees.

The Director of postgraduate studies organises an annual session for Physics UGs to explain the PGR career path and advertise PGR studentship opportunities within the Department. Since this year, this is accompanied by presentations from later year PGRs.

Figure 12 demonstrates that the female representation among Bath Physics PGRs is consistently enhanced compared to the UG cohort, by at least 6 percentage points and up to 14 percentage points in 2014/15. DSAT further examined data from the Destinations of Leavers from HE survey (Figure 13). Those graduating with MPhys/MSci degrees are more likely to continue further studies than BSc students. Perhaps more notably, among each of these groups female graduates are significantly more likely to register for a further study programme, by a factor 1.6 - 1.9. From a perspective of fostering academic careers in a sector that historically has struggled (and at some levels continues to struggle) with a leaky pipeline for female scientists, this is an encouraging trend to note. Bath graduates not pursuing further studies go to a wide range of careers including scientific research and development, engineering, banking and finance. More than half of them continue in STEMM, with about 50% of those going into non-STEMM fields bringing their data science skills to bear as consultants, financial analysts or investment bankers. The first destination data on female graduates not pursuing further studies indicates two thirds remain in STEMM, with the financial sector being relatively less popular as a destination.

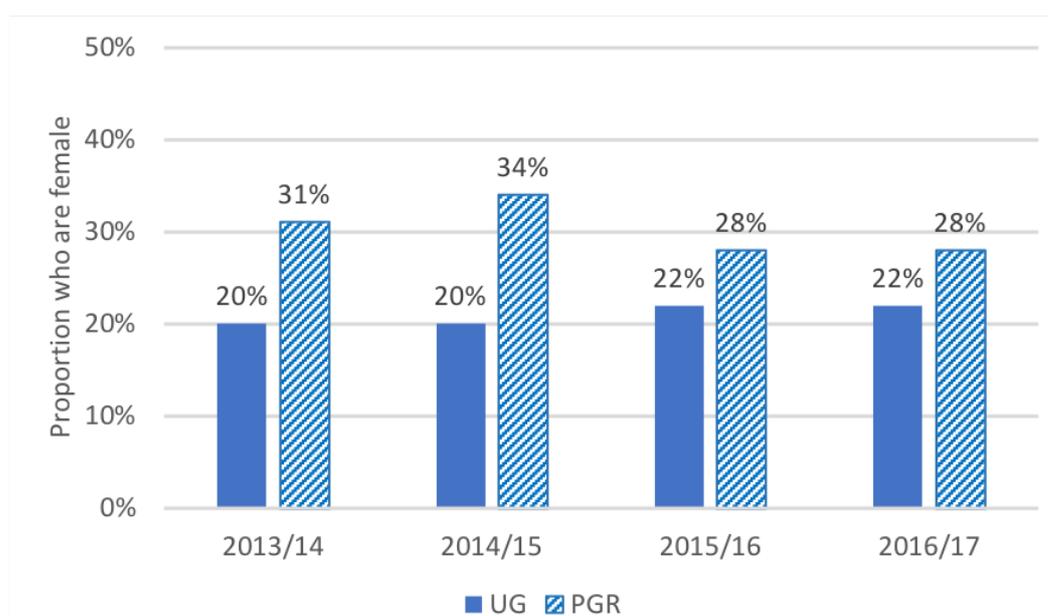


Figure 12: Female percentage of UG and PGR students by academic year.

Female UG → PG
All: 44% (MPhys: 64%)

Male UG → PG
All: 27% (MPhys: 34%)

Figure 13: Percentage of full-time, first degree undergraduate students in Physics who responded to the Destinations of Leavers from HE survey (a total of 135 of which 41 female) that are registered on a further study programme, by gender. Numbers in brackets mark the equivalent UG to PG progression data for MPhys/MSci students only (i.e., no BSc).

4.2. Academic and research staff data

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

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

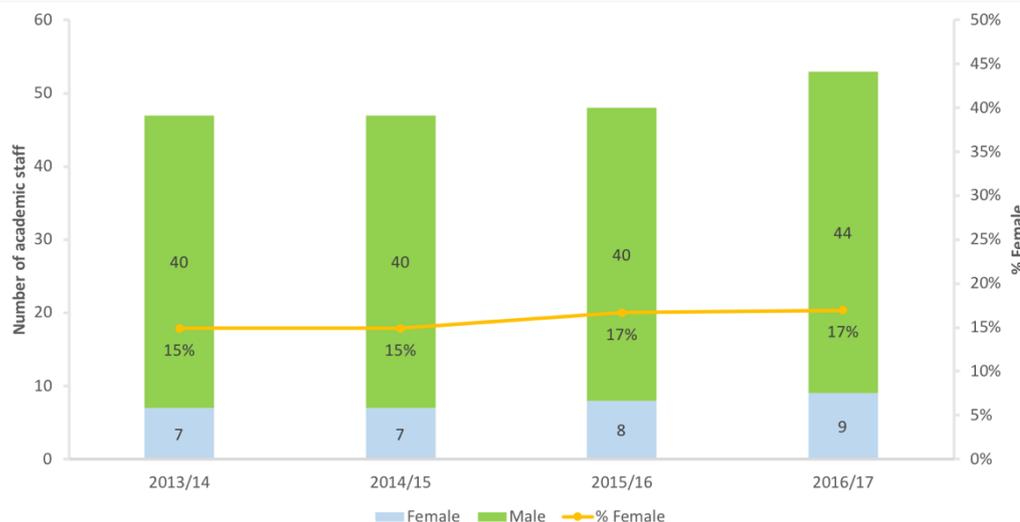


Figure 14: Total number of academic and research staff in the Department by gender (bars) and % female (line) by academic year. Data from HR headcount.

Throughout our submission, we refer to ‘academic staff’ as those on Lecturer to Professor positions as well as the senior role of Director of Teaching and Resources. Any table or figure including also PDRAs, research and teaching Fellows is captioned as ‘academic and research staff’.

Since 2013/14, the number of academic and research staff has increased by 13% (Figure 14). The proportion of academic and research staff who are female has seen a modest rise, from 15% to 17% since 2013/14, an increase from 7 to 9 staff. As such, we are close to but remain 2% below the benchmark in the sector (Figure 15). Among the academic staff the number of women in the professoriate increased from 1 to 2 between 2013/14 and 2016/17, and likewise the number of female lecturers increased from 1 to 2 (Figure 16, Table 8).

Including also a new arrival in September 2018 (Section 5.1(i)), we currently have 6 female members of the permanent academic staff: 3 lecturers, 2 professors and the

Director of Teaching and Resources (listed under 'Other' in Table 8 and Figure 16). 4 out of 17 of our research-only staff are female and our 3 teaching-only staff are all male.

The small proportion of women physicists in both research and/or teaching contract functions (Figure 17), albeit in line with the national picture, begs for a continued proactive approach in advertising of positions as well as a fair and transparent recruitment process. In Section 5.1 we discuss this further, including also statistics on the latest recruitment round, and demonstrate that with a gender-balanced recruitment at the Early Career Researcher (Fellows and Lecturers) level in recent years, the Department has laid the seeds to improve this situation in the near future.

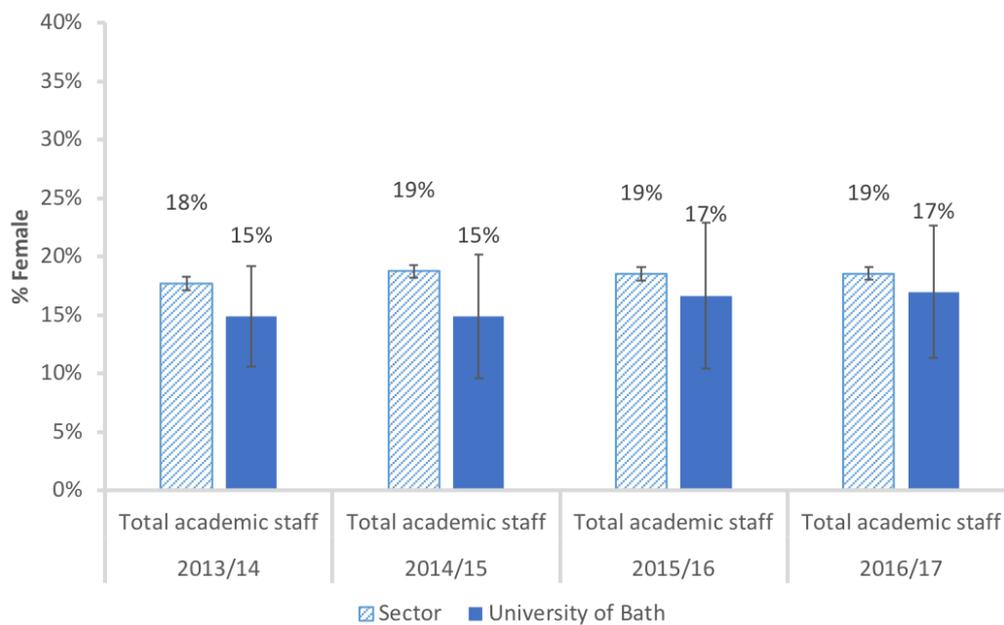


Figure 15: Percentage of female academic and research staff in the Department of Physics at the University of Bath compared to other Higher Education Institutions across the sector (HESA data).

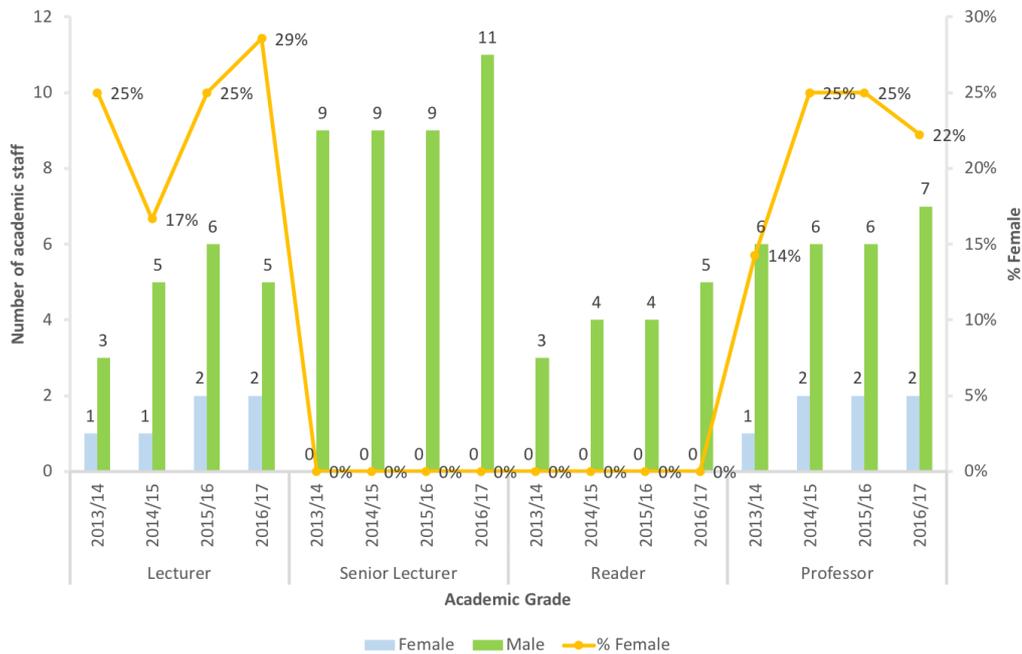


Figure 16: Academic staff in the Department of Physics by grade and gender (bars) and % female (line) by academic year. One (female) senior academic staff member, acting as Director of Teaching and Resources, is not included in the above categories. She is listed under 'Other' in Table 8 and in Figure 15.

Department of Physics		Total	Research	Teaching	Lecturer	Senior Lecturer	Reader	Professor	Other
2013/14	Female	7	4	0	1	0	0	1	1
	Male	40	16	2	3	9	3	6	1
	%F	15%	20%	0%	25%	0%	0%	14%	50%
2014/15	Female	7	3	0	1	0	0	2	1
	Male	40	11	3	5	9	4	6	2
	%F	15%	21%	0%	17%	0%	0%	25%	33%
2015/16	Female	8	3	0	2	0	0	2	1
	Male	40	10	3	6	9	4	6	2
	%F	17%	23%	0%	25%	0%	0%	25%	33%
2016/17	Female	9	4	0	2	0	0	2	1
	Male	44	13	3	5	11	5	7	0
	%F	17%	24%	0%	29%	0%	0%	22%	100%

Table 8: Academic and research staff in the Department of Physics by role and gender by academic year.

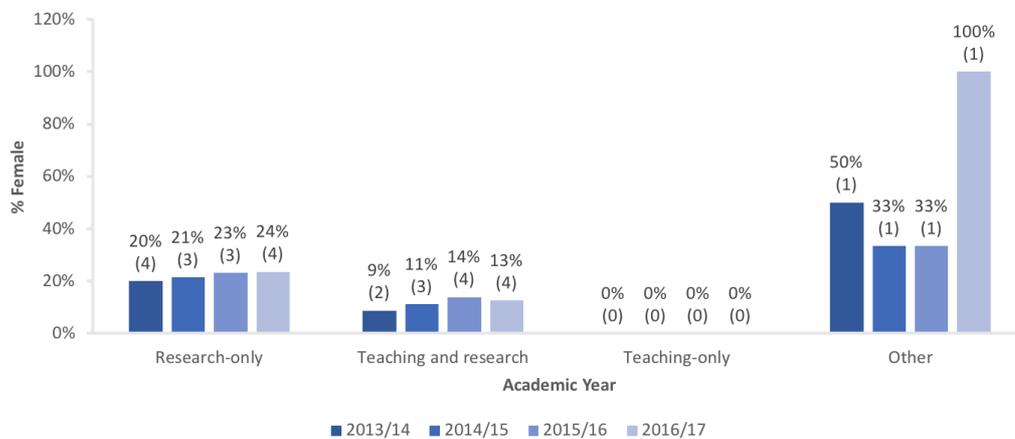


Figure 17: Female percentage of academic and research staff in the Department by contract function and academic year. Note the small absolute numbers of female staff in each category (between brackets).

SILVER APPLICATIONS ONLY

Where relevant, comment on the transition of technical staff to academic roles.

The Professional & Support Staff for Physics consists of 8 men and 8 women, nearly all line managed directly by the Faculty of Science. Their overall gender balance is composed of two groups with more skewed gender ratios: administrative staff (71% female) and technical staff (33% female). No technical or administrative staff has transitioned into academic roles in our Department. An overview of how they are supported in their career progression is presented in Section 5.2.

(ii) **Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender**

Comment on the proportions of men and women on these contracts. Comment on what is being done to ensure continuity of employment and to address any other issues, including redeployment schemes.

Broken down by contract type (fixed-term vs open-ended), Figure 18 reveals no clear pattern by gender: in two of the years under consideration relatively more women are on fixed term contracts and in the other two relatively more men (see also Table 9).

Table 10 confirms that the fixed term contracts are predominantly PDRAs and Fellows on a research-only contract, typically of 2-3 years duration. In the last two years, all research-only staff have been on fixed term contracts. One out of three teaching-only staff is on a fixed term contract. All but one of the teaching and research staff are on open contracts.

Not included in the tables are hourly paid contracts which are only used for PGR demonstrators and UG ambassadors. These roles are allocated on the basis of expressions of interest by the students in question.

We do not employ any zero-hour contract staff.

As part of the University's Organisational Change Policy, employees nearing the end of their fixed-term contract automatically enter the University's Redeployment Register. This means they receive notification by email of any vacancies arising at the same grade or one grade lower, and are given preferential consideration for the vacancies they apply to.

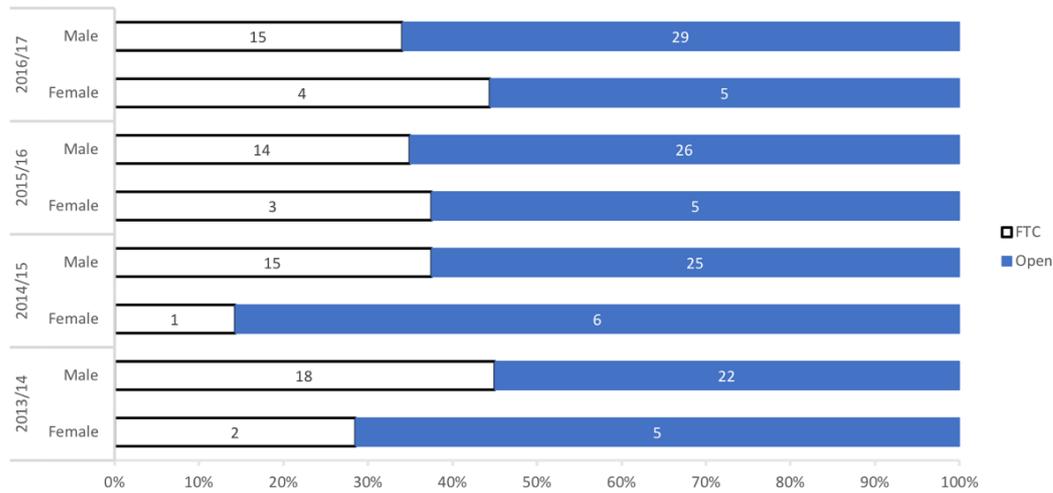


Figure 18: Proportion of academic and research staff on fixed term (FTC) and open-ended (Open) contracts by gender and by academic year. Numbers of staff in each category are shown in bars.

Physics (ACADEMIC AND RESEARCH)		Female	Male	Total	% Female
2013/14	FTC	2	18	20	10%
	Open	5	22	27	19%
	Total	7	40	47	15%
2014/15	FTC	1	15	16	6%
	Open	6	25	31	19%
	Total	7	40	47	15%
2015/16	FTC	3	14	17	18%
	Open	5	26	31	16%
	Total	8	40	48	17%
2016/17	FTC	4	15	19	21%
	Open	5	29	34	15%
	Total	9	44	53	17%

Table 9: Academic and research staff by contract type (fixed-term contract, FTC; open-ended contract, Open) by gender and by academic year.

Physics (ACADEMIC AND RESEARCH)		FEMALE					MALE				
		TOTAL	Research-only	Teaching-only	Teaching and Research	Other	TOTAL	Research-only	Teaching-only	Teaching and Research	Other
2013/14	FTC	2	2	0	0	0	18	16	0	1	1
	Open	5	2	0	2	1	22	0	2	20	0
	% FTC	29%	50%	-	0%	0%	45%	100%	0%	5%	100%
2014/15	FTC	1	1	0	0	0	15	11	1	1	2
	Open	6	2	0	3	1	25	0	2	23	0
	% FTC	14%	33%	-	0%	0%	38%	100%	33%	4%	100%
2015/16	FTC	3	3	0	0	0	14	10	1	1	2
	Open	5	0	0	4	1	26	0	2	24	0
	% FTC	38%	100%	-	0%	0%	35%	100%	33%	4%	100%
2016/17	FTC	4	4	0	0	0	15	13	1	1	0
	Open	5	0	0	4	1	29	0	2	27	0
	% FTC	44%	100%	-	0%	0%	34%	100%	33%	4%	-

Table 10: Academic and research staff contract type split by contract function, gender and academic year (fixed-term contract, FTC; open-ended contract, Open).

(iii) Academic leavers by grade and gender and full/part-time status

Comment on the reasons academic staff leave the department, any differences by gender and the mechanisms for collecting this data.

Leavers are overwhelmingly staff in research-only positions on fixed-term contracts coming to an end of term and funding (Tables 11 – 13). Their leaving rates vary considerably from year to year but given small number statistics show no gendered pattern.

The data for 2013/14 – 2016/17 show that the Department retains its permanent staff. Only one teaching and research staff member left: a male professor in 2013/14, due to ill health. However, more recently there have been three departures of (male) staff (1 in 2017/18; 2 in 2018/19). One left for a Head of School position, one was promoted to Senior Lecturer elsewhere, and one moved to the University of Cambridge. The recent leaves are offset by a larger number of new recruitments, many of whom are female (see Figure 21 in Section 5.1(i)).

Exit questionnaires from HR show that first destinations of leavers are mostly to other HE institutions, with less than 20% of respondents reporting a transition to the private sector.

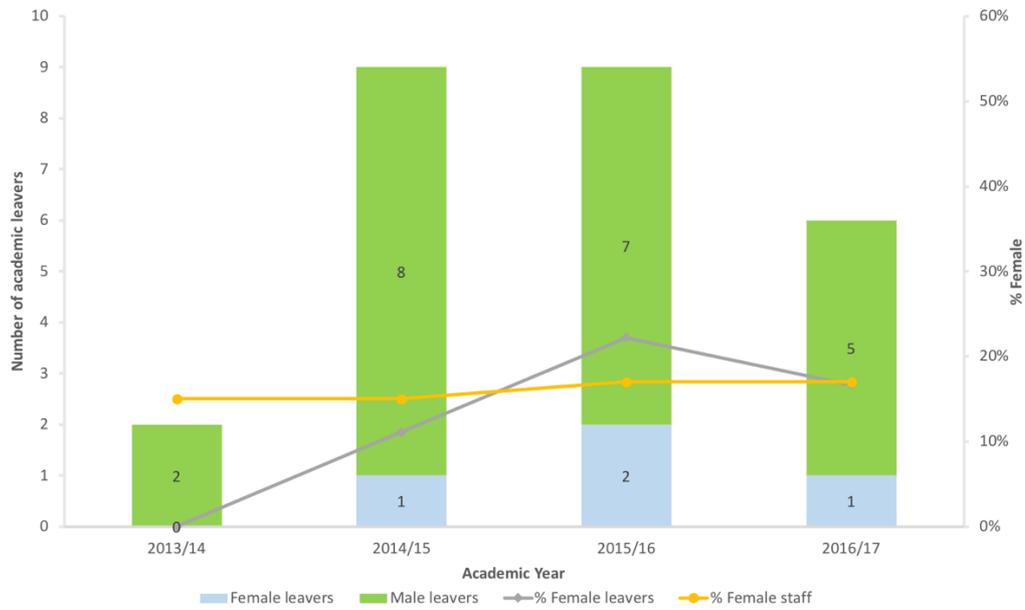


Figure 19: Academic and research leavers by gender (bars) and % female leavers and % female staff (lines) by academic year.

Physics (ACADEMIC & RESEARCH)		Total	Research	Teaching	Lecturer	Senior Lecturer	Reader	Professor	Other
2013/14	Female	0	0	0	0	0	0	0	0
	Male	2	1	0	0	0	0	1	0
	% F	0%	0%	-	-	-	-	0%	-
2014/15	Female	1	1	0	0	0	0	0	0
	Male	8	8	0	0	0	0	0	0
	% F	11%	11%	-	-	-	-	-	-
2015/16	Female	2	2	0	0	0	0	0	0
	Male	7	7	0	0	0	0	0	0
	% F	22%	22%	-	-	-	-	-	-
2016/17	Female	1	1	0	0	0	0	0	0
	Male	5	2	1	0	0	0	0	2
	% F	17%	33%	0%	-	-	-	-	0%

Table 11: Academic and research staff leavers by grade, gender and by academic year.

Physics (ACADEMIC & RESEARCH)		FTC	Open	Total	Full time	Part time
2013/14	Female	0	0	0	0	0
	Male	2	0	2	1	1
	% F	0%	-	0%	0%	0%
2014/15	Female	1	0	1	1	0
	Male	8	0	8	8	0
	% F	11%	-	11%	11%	-
2015/16	Female	2	0	2	1	1
	Male	6	1	7	7	0
	% F	25%	0%	22%	13%	100%
2016/17	Female	1	0	1	0	1
	Male	5	0	5	5	0
	% F	17%	-	17%	0%	100%

Table 12: Academic and research staff leavers by contract type and gender by academic year (fixed-term contract, FTC; open-ended contract, Open).

Contract type	Gender		2013/14	2014/15	2015/16	2016/17
Research	Female	N	4	3	3	4
		Leaving	0	1	2	1
		Leaving rate	0%	33%	67%	25%
	Male	N	16	11	10	13
		Leaving	1	8	7	2
		Leaving rate	6%	73%	70%	15%
Teaching	Female	N	0	0	0	0
		Leaving	0	0	0	0
		Leaving rate	-	-	-	-
	Male	N	2	3	3	3
		Leaving	0	0	0	1
		Leaving rate	0%	0%	0%	33%
Teaching and Research	Female	N	2	3	4	4
		Leaving	0	0	0	0
		Leaving rate	0%	0%	0%	0%
	Male	N	21	24	25	28
		Leaving	1	0	0	0
		Leaving rate	5%	0%	0%	0%

Table 13: Leaving rates by contract type (Research; Teaching; Teaching and Research) and gender by academic year.

[1998 words]

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS 6498/6500 WORDS

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

5.1. Key career transition points: academic staff

(i) Recruitment

Break down data by gender and grade for applications to academic posts including shortlisted candidates, offer and acceptance rates. Comment on how the department's recruitment processes ensure that women (and men where there is an underrepresentation in numbers) are encouraged to apply.

Tables 14 and 15 provide an overview of applicants, shortlisted candidates and starters by gender, grade and academic year. Figure 20 summarises the key results over the full review period, including HR records on recruitment in 2017/18 for a more statistically robust identification of trends.

In line with the national statistics from the Institute of Physics and Royal Astronomical Society, we find the applicant pool for academic and research positions remains far from gender balanced, with an 18% female fraction, and slightly worse when considering grades of Lecturer and up only. However, in subsequent steps the percentage of women goes up: 22% of all shortlisted candidates for academic and research positions were women and 28% among those shortlisted for academic staff positions (Lecturer to Professor). Among new starters the proportion of women in the latter category rises further to 30%.



Figure 20: Female percentage of applicants, shortlisted candidates and new starters among academic and research staff in the Department of Physics, for the period of 2013/14 – 2017/18. Percentages in brackets mark the statistics for academic staff only (i.e., Lecturer to Professor).

Our Athena SWAN **Bronze actions** identified several steps to encourage women to apply to academic and research staff positions in our Department and guarantee a fair selection process.

Prior to the selection, a search champion is appointed for each open staff post who targets individuals in the relevant field with significant research potential, mindful of a healthy gender balance (at or above female representation in the discipline). Adverts express explicitly a commitment to providing a supportive and inclusive working environment, encouraging women and under-represented groups to apply. Positions in Astrophysics, representing nearly half of the growth since 2013/14 with an intake of 4 women and 3 men ranging from Prize Fellow to Professor, have additionally been advertised in the American Astronomical Society's Women Newsletter.

Applications of both academic and research staff are evaluated by a selection panel with one or more woman physicists (for academic staff positions usually the HoD and Director of Teaching). For academic posts any single-gender shortlist has to be explicitly motivated in writing, and is ideally avoided. All panelists must have undertaken the University's 'Recruitment Training Panel & Chair'. Across all academic staff, the uptake

of this course as well as complementary ones on 'Diversity in the Workplace' and 'Unconscious Bias' has increased significantly to 76%, 85% and 76% respectively. Training uptake by female staff is slightly higher, possibly because they are more likely to be asked to participate in selection panels than men. By initiating an annual census of training uptake, we expect 100% of staff to undertake these courses (**Action 3.2**).

Physics (ACADEMIC & RESEARCH)		APPLICANTS								SHORTLISTED							
		Total	Research	Teaching	Lecturer	Senior Lecturer	Reader	Professor	Other	Total	Research	Teaching	Lecturer	Senior Lecturer	Reader	Professor	Other
2013/14	Female	25	8	0	0	16	0	0	1	2	0	0	0	1	0	0	1
	Male	134	37	0	0	87	0	0	10	16	9	0	0	4	0	0	3
	% Female	16%	18%	-	-	16%	-	-	9%	11%	0%	-	-	20%	-	-	25%
2014/15	Female	73	17	11	37	0	0	8	0	11	3	1	6	0	0	1	0
	Male	371	73	30	227	0	0	25	16	34	11	3	14	0	0	3	3
	% Female	16%	19%	27%	14%	-	-	24%	0%	24%	21%	25%	30%	-	-	25%	0%
2015/16	Female	38	11	5	13	1	0	0	8	7	1	0	3	0	0	0	3
	Male	216	85	10	84	17	0	0	20	37	20	1	6	4	0	0	6
	% Female	15%	11%	33%	13%	6%	-	-	29%	16%	5%	0%	33%	0%	-	-	33%
2016/17	Female	13	13	0	0	0	0	0	0	2	2	0	0	0	0	0	0
	Male	41	41	0	0	0	0	0	0	11	11	0	0	0	0	0	0
	% Female	24%	24%	-	-	-	-	-	-	15%	15%	-	-	-	-	-	-
Overall	Female	149	49	16	50	17	0	8	9	22	6	1	9	1	0	1	4
	Male	762	236	40	311	104	0	25	46	98	51	4	20	8	0	3	12
	% Female	16%	17%	29%	14%	14%	-	24%	16%	18%	11%	20%	31%	11%	-	25%	25%

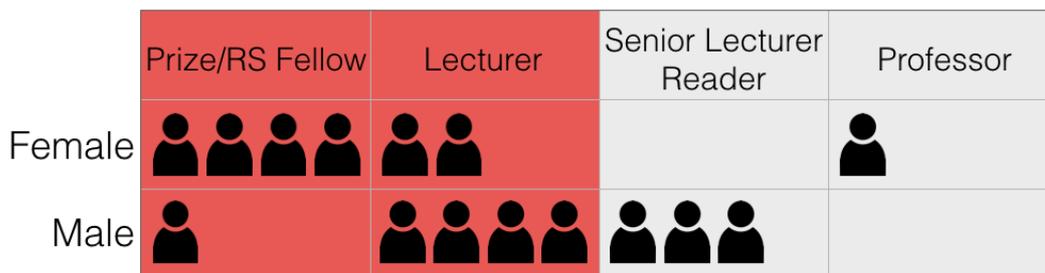
Table 14: Number of applicants and shortlisted candidates in the Department of Physics by gender and grade for applications to academic and research posts by academic year. Where positions are advertised at multiple levels (e.g., Lecturer/Senior Lecturer) the lowest grade has been taken.

Physics (ACADEMIC & RESEARCH)		NEW STARTERS							
		Total	Research	Teaching	Lecturer	Senior Lecturer	Reader	Professor	Other
2013/14	Female	0	0	0	0	0	0	0	0
	Male	6	5	0	0	0	0	0	1
	% Female	0%	0%	-	-	-	-	-	0%
2014/15	Female	2	1	0	0	0	0	1	0
	Male	8	5	1	0	0	1	0	1
	% Female	20%	17%	0%	-	-	0%	-	0%
2015/16	Female	5	4	0	1	0	0	0	0
	Male	10	8	0	1	1	0	0	0
	% Female	33%	33%	-	50%	0%	-	-	-
2016/17	Female	2	2	0	0	0	0	0	0
	Male	8	5	1	1	0	1	0	0
	% Female	20%	29%	0%	0%	-	0%	-	-
Overall	Female	9	7	0	1	0	0	1	0
	Male	32	23	2	2	1	2	0	2
	% Female	22%	23%	0%	33%	0%	0%	100%	0%

Table 15: Number of new starters in the Department of Physics by gender and grade for academic and research staff by academic year. Note that new starters could have applied in the previous academic year.

Considering new Fellows and academic staff in our Department since 2013/14 (Figure 21), we find a much more balanced gender ratio than that among established staff. This is particularly true among Early Career Researchers (Fellows and probationary lecturers; ECRs), where 6 women and 5 men have joined. All but one of them are either on probation or received a proleptic lectureship, meaning that their numbers in due time will feed through to the more senior, tenured staff. Three ECRs were previously research associates within the Department who were encouraged to apply to the position (e.g., Case Study 1) whereas the others were externally recruited.

ECRs and postdoctoral research associates are supported on an individual basis through the departmental mentorship scheme, introduced as a **Bronze action**, the impact of which is evidenced by the abundant praise received in our culture survey (see Section 5.1(ii)). This is further complemented by a new, cohort-based initiative of Early Career Research lunches (**Action 2.4**) organised by the Department's Early Career champion. Over a dozen well-attended lunch gatherings ECRs discussed career planning, recruitment, supervision, letter writing, funding and setting priorities with each time a different senior guest. 100% of poll respondents indicated that the ECR lunches were helpful to their development as an academic (54% strongly agree; 46% agree), with 75% of respondents indicating their confidence improved.



%Female: 55% among Early Career Researchers; 47% overall

Figure 21: New additions to the academic staff in the Department of Physics since 2013/14, including the latest round of recruitment during the 2017/18 academic year. Early career researchers including Prize Fellows, Royal Society (RS) Fellows and probationary lecturers are marked in red.

(ii) Induction

Describe the induction and support provided to all new academic staff at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

Following **Bronze Actions** the first point of contact for all newly arriving staff was changed from their specific line manager to the Departmental Coordinator, hence streamlining the induction process as a structural element of the Department's operations and ensuring a 100% uptake. The Departmental Coordinator welcomes the new arrival, introduces key people and services, oversees completion of an induction checklist (flagging, e.g., compliance to health & safety) and provides two key documents:

- A brief, 2-page induction sheet with basic who-is-who and what-is-where for daily Departmental life.
- The newly compiled Staff Handbook providing a comprehensive guide to policies regarding flexible working and leave, pay and reward, promotion, childcare, absence, finances, and grants.

Complementing the departmental induction process, all new probationers are since 2018 invited to a University wide induction session detailing the probation process and the services available to support them (e.g., Research & Innovation Services, Learning & Teaching Centre). One new Lecturer in Physics states: 'The Staff Induction was a very useful overview of the processes that we can expect to be in place for our support and our evaluation as new staff [...] It made me feel much less intimidated about the job I was about to start.'

Next, the Department mentoring champion, introduced as part of a University wide scheme, offers every new member of academic and research staff the option of a mentor, tailored to the person's stage of career, needs and interests. 43% of PDRA poll respondents indicate they have a mentor, all of whom identify the scheme as helpful. Among academic staff and fellows 55% participate as either mentor or mentee. One respondent states: 'The mentoring scheme is the thing I have found most valuable since joining the university'. Another qualifies it as 'a pleasant and informal place to discuss the various aspects of academic life [...] as well as a longer term outlook'.

(iii) Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

Over the course of the review period, 6 applications for promotion have been submitted (2 in 2015/16, 4 in 2016/17), all of them by men. Five out of 6 promotion cases were successful, comprising a promotion to Grade-8 Teaching Fellow, two to Senior Lecturer, a translation to Reader, and a promotion to Professor. Feedback was provided to the unsuccessful candidate. While the absence of women applying for promotion may appear striking, it should be noted that the majority were still on probation or already active as Professor during the review period.

As part of our **Bronze Actions** we have set up a Career Progression Advisory Group (CPAG), which identifies and encourages candidates for promotion and provides feedback on promotion application material. All four promotion cases where CPAG provided advice were successful. Despite its success in this regard a few individuals raised concerns that CPAG's workings remain slightly opaque. Consequently, a restructured staff development committee (SDC) will combine mentorship and career progression (**Action 2.2**). In our Department culture survey 50% of female academic staff and Fellows compared to 100% of male respondents indicate they understand the promotion criteria. This may be intertwined with female members of staff counting relatively more Early Career Researchers, but cannot solely be attributed to a difference in grade. To address this gendered trend, one topic this committee will focus on is therefore raising awareness regarding the promotion process and criteria (**Action 2.2**, in line with **USAT Action 1.2**).

Finally, DSAT teams across the Faculty jointly initiated a faculty-wide networking event "From PhD to pro-VC" for sharing of information and good practice regarding career progression and related support. Physics was well represented with 24 registered attendants. 80% of respondents rated the event as good, very good or excellent, and

50% felt more informed about the range of career progression support available to them after the meeting.

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

Provide data on the staff, by gender, submitted to REF versus those that were eligible. Compare this to the data for the Research Assessment Exercise 2008. Comment on any gender imbalances identified.

Two women submitted to REF 2014, corresponding to 100% of the potentially eligible female staff. 84% of male eligible staff (21 out of 25) were submitted. No information was kept on record about staff submitted to RAE 2008, either by the Department or by the University's central Research Services. Looking ahead, the number of women anticipated to be submitted to REF 2021 will have at least quadrupled, likely comprising 100% of the eligible female staff. REF readiness exercises routinely executed by the Research Committee support all staff in submitting the strongest possible outputs and impact cases.

SILVER APPLICATIONS ONLY

5.2. Key career transition points: professional and support staff

(i) Induction

Describe the induction and support provided to all new professional and support staff, at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

All new administrative and technical support staff follow the same induction process outlined for academics, with the Departmental Coordinator as first point of contact and the induction sheet and staff handbook as resources.

(ii) Promotion

Provide data on staff applying for promotion, and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

No formal promotion paths exist within the University for Professional & Support Staff (PSS), leading to a low fraction (17%) of PSS survey respondents seeing a career path for themselves at our University. A common thread among respondents is strong satisfaction with the immediate line management, but less so with higher layers in the Faculty. Respondents express a lack of timely succession planning, with the potential risk of affecting the uptake of flexible working (**Action 7.3**).

In support of PSS careers are two schemes of financial recognition for exceptional work (Table 16). "Recognising Excellence" is a one-off payment administered by the Faculty. This scheme is complemented by the "Outstanding Contribution" award, a recurring

and pensionable financial increase for PSS at the top of their salary level who previously received a “Recognising Excellence” award. The “Outstanding Contribution” scheme is administered by the University centrally. Combining statistics for both awards over the full review period shows that nominations for these schemes have been gender balanced (10 women, 12 men), in line with the 50:50 make up of PSS. The success rate has been slightly higher for women (70%) than for men (58%). DSAT highlighted the lack of nominations for “Outstanding Contribution” over the past three years to the Departmental Executive Committee (see Table 16).

Action 7.1: Line managers will consider all PSS eligible for “Outstanding Contribution” award for nomination.

The Department further encourages nominations for external prizes in recognition of exceptional performance by PSS, leading to an award of the Papin prize to one of our (female) technicians during the national Higher Education Technicians Summit 2017.

Recognising Excellence scheme Professional & Support staff Physics					
		2014	2015	2016	2017
Female	Nominations	2	0	2	5
	Successful	1	0	2	4
Male	Nominations	2	1	2	3
	Successful	2	1	1	1
Outstanding Contribution scheme Professional & Support staff Physics					
Female	Nominations	1	0	0	0
	Successful	0	0	0	0
Male	Nominations	4	0	0	0
	Successful	2	0	0	0

Table 16: Awards for Professional & Support staff administered internally within the University by gender and year. Action 7.1 will address the recent lack of nominations highlighted in red.

5.3. Career development: academic staff

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

The Academic Staff Development team offers training programmes for staff at all career levels. Table 17 presents the uptake by gender. Overall, the percentage of women making use of these opportunities exceeds their representation within the academic and research staff. This reflects in part that most women have joined the Department relatively recently, and that many of the training courses focus on new arrivals. All probationary academic staff follow the Bath Course in Enhancing Academic Practice which covers teaching and learning, curriculum design and research management. Successful completion leads to a Fellowship of the Higher Education Academy. For those arriving as University Prize Fellows (coupled to a proleptic lectureship) a similar training programme is in place. Two PDRAs (1 female, 1 male) are following Bath's

Academic Career Academy, a tailored development course for ECRs/PDRAs covering career planning, developing your niche, proposal writing and mock interviews (**USAT Action 1.3**). Opportunities for PDRAs to expand their expertise and resume by engagement in teaching are available, and currently used by one. One female staff member followed the course 'Funding opportunities for women'. Finally, one female Lecturer applied for and won a competitive place on the external Aurora Leadership Programme.

More concerning is the continued development of academic staff past the compulsory schemes for new arrivals. DSAT's culture survey reveals only 40% of academic staff feel actively encouraged to take up career development opportunities, with 38% indicating they would like more active encouragement. This contrasts with research staff, who unanimously express that they feel actively encouraged.

Staff career development is monitored and planned through annual Staff Development & Performance Reviews (SDPRs, see 5.3(ii)). 80% of survey respondents indicate that career progression and future plans are discussed at their SDPR. **Action 2.3** will further raise the SDPR uptake among both academic and research staff, enhance its effectiveness in terms of choice and training of reviewers, and guarantee systematic record keeping including an interim evaluation against stated objectives. In practice, guidance towards training is also provided on a more regular basis through the mentorship scheme. To share good practice among staff of all seniorities in a setting less formal than the Bath Course, a Physics Teaching Forum started in 2018/19.

Training courses attended 2014/15 - 2017/18			
Course category	Female	Male	Total (% F)
The Bath Course	3	7	10 (30%)
Research Development Programme	25	34	59 (42%)
Prize Fellow Programme	8	3	11 (73%)
Academic Staff Development	1	8	9 (11%)

Table 17: Number of academic and research staff in the Department of Physics attending training courses offered by the University of Bath or externally (Aurora). The Bath Course numbers refer to number of enrolments for the 14-session course. Data from Academic Staff Development Unit.

(ii) **Appraisal/development review**

Describe current appraisal/development review schemes for staff at all levels, including postdoctoral researchers and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

SDPRs occur annually for non-probationers, featuring an evaluation of the past year and forward looking discussion on development needs and potential plans for promotion. An equivalent annual appraisal forms part of probation. SDPRs are run for all job families: professional & support, academic, and research. For the latter group, SDPRs only became compulsory in 2016/17. Before, SDPRs for PDRAs took place on a voluntary basis and were not always actively pursued. Moreover, SDPR reports were not always uploaded diligently to the HR database. The numbers in Table 18 therefore represent lower limits.

To make SDPRs optimally beneficial to PDRA or academic staff, they are not necessarily performed by the line manager. Reviewees can choose their reviewer, allowing impartial advice from a senior colleague.

HR records for SDPRs held in 2017/18 show a completion rate of 90% (68%) for female (male) academic and research staff. We recognise that more rigorous monitoring of SDPR uptake is required to understand whether staff are making use of this key tool for career development planning, and if not why not. Historically, this was complicated by the fact that HR did not send automated triggers notifying PDRA reviewees or reviewers that SDPRs were due, nor did it track which PDRA required one (i.e., passed their probation time). In line with Faculty-wide planning, we will streamline the SDPR process by concentrating it in January for everyone with interim follow-up 6 months later, in order to more consistently monitor and increase the uptake to 100% (**Action 2.3**).

Monitoring and organisational issues aside, our survey suggests that all but one of the PDRA respondents identify the SDPR process as helpful (43%) or very helpful (43%). Among academic staff 63% evaluate the process positively. Training courses for reviewers and reviewees to get the most out of SDPRs are organised by the Staff Development team, and have been followed by half of the survey respondents and 100% of those doing the reviews as appraisers.

	2013/14		2014/15		2015/16		2016/17		2017/18	
	Female	Male								
Academic and Research	4	16	4	23	2	12	5	22	9	27

Table 18: Number of appraisals for academic and research staff uploaded to the HR system by gender and academic year.

(iii) Support given to academic staff for career progression

Comment and reflect on support given to academic staff, especially postdoctoral researchers, to assist in their career progression.

The mentor coordinators for academic staff and PDRA consult potential mentees about a choice of mentor tailored to their development needs. As highlighted earlier, 100% of PDRA survey respondents feel actively encouraged to take up career development opportunities, a trend further reflected in positive evaluations of the SDPR process.

Complementing the above one-on-one support, research lunches, the annual Network of Women in Physics conference and a Department-wide research conference help to stimulate cohesion between research groups. While speakers for the internal lunch seminars have thus far been drawn from academic staff and Prize Fellows, they will this year also include PDRA (**Action 2.4**). Targeting more specifically PDRA, Fellows and probationary Lecturers, the Early Career Research lunches provide a forum for discussion and sharing of good practice regarding all facets of academic life (see Section 5.1i for specific topics and impact evidenced by feedback received). Key to its success is that the agenda is set by the participants themselves. In addition, PDRA are explicitly invited to Departmental Away Days.

Support and development of mid-career staff comprises leadership training (see 5.3(i)), grant writing retreats (see 5.3(v)) and academic networks. Records from 2013/14 – 2016/17 show participation in the Senior Women’s Network (**USAT action 3.4**) by 4 female members of academic staff, with one as chair. Finally, after three years of continuous employment academic staff are eligible for sabbatical leave to advance their scholarship and research. One staff member making use of this opportunity in 2015/16 states: ‘Being free [of teaching and admin duties] has enabled me to start new projects, learn new technical skills and further the impact of my research with different industries.’

Staff are encouraged to participate in regional networking and workshops supported by the GW4 alliance, to attend national and international conferences to promote their research to peers, and to liaise with Faculty Press Officers to advertise high impact discoveries to the wider public (Section 7).

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

Comment and reflect on support given to students at any level to enable them to make informed decisions about their career (including the transition to a sustainable academic career).

The cornerstone of student guidance in the first two years of the UG programme are weekly small-group tutorials, with career orientation as a frequently recurring theme. In subsequent years, students meet their tutors once a semester or as circumstances prompt. The BSc and MPhys research projects, where UG students are embedded in a research group, provide the most direct taste of an academic career. Several additional services provide advice and/or training relevant to their subsequent careers in academia or industry. The Faculty Placement team runs workshops offering CV advice and interview preparation. The subsequent placements provide arguably the best, most hands-on experience to aid career orientation. To disseminate these experiences to as large a group as possible, including UG students not enlisted on placements, the Network of Women in Physics has organised a Placement & Career day with panel discussions featuring placement returners and recent graduates (**Bronze Action 4**). The director of postgraduate studies further organises info sessions for those UG and PGR students interested in academic careers (see 4.1(v)).

Additionally, the University Careers Service offers one-on-one guidance and practice interviews to both UGs and PGRs (Table 19), whereas courses on more general academic skills for PGRs are offered as part of the PGSkills programme. These include information seeking, writing, time management but also, e.g., a reflection on the imposter syndrome. Following promotion of the benefits of development courses (**Bronze Action 4**), the uptake of these training opportunities has more than tripled over the review period (Figure 22), with the uptake by women remaining stable at around 30%, similar to their representation within the PGR cohort at large.

PGRs enter preferentially as a cohort at the start of the Academic Year, with an induction week provided by the Doctoral College. Additionally, senior PhD students organise a welcome and induction to the new cohort within the Department. As part of

our **Bronze Actions** they also provide PhD peer mentorship. In our 2018 survey, 37% of respondents indicate they have a PhD peer mentor. One PGR student notes 'having a peer mentor helped me a lot to immediately feel welcomed and become integrated in the department'. However, only 23% have found the scheme helpful compared to 62% not. Feedback suggests this stems primarily from peer mentors meeting their mentees too sporadically, and in an individual case a PGR student complains having no one to talk to other than the supervisor.

Action 5.2: We will provide training to PGR mentors laying out more explicitly the expectations of the PGR peer-to-peer mentoring scheme.

To facilitate a smooth PhD programme, supervisors are provided a Guide for PhD Supervisors, laying out the milestones of candidature, confirmation, submission, and signposting information on mental health, wellbeing and counselling as well as leave entitlement and other administrative aspects.

Within their research groups, PGRs are treated as peer researchers. This is echoed by 90% of survey respondents feeling valued by their research group, 100% feeling valued by their supervisor, and 90% finding it easy to have their opinion heard in their research group. Visiting speakers are allocated time to sit together and discuss science with PGRs. Students are also invited to the seminar dinners. To lower the threshold to participate and benefit from the networking opportunities, they are offered the dinner at a discount.

Finally, the most direct support to career progression comes from the supervisory team, with the secondary supervisor often taking on a more pastoral role. New academic staff are required to attend training on PGR supervision as part of the Bath Course (uptake in Table 17). First point of contact in case of irregularities in the interaction with the supervisory team is the postgraduate Director of Studies, and next the PGR Ombudsman of the Doctoral College. Whereas these structures are in place, consultation of the PG-SSLC learned that such support could be signposted more clearly as part of a PGR induction (**Action 5.3**). Finally, an exit sheet will be completed upon conclusion of the programme to aid the Director of Studies in reflecting on the support provided and obtain a better census of first destinations (**Action 5.4**).

Careers Service 1:1 advice	2014/15			2015/16			2016/17		
	F	M	Total (% F)	F	M	Total (% F)	F	M	Total (% F)
UG students	31	63	94 (33%)	12	49	61 (20%)	11	87	98 (11%)
PGR students	3	3	6 (50%)	2	13	15 (13%)	1	6	7 (14%)

Table 19: Attendances at Careers Service 1:1 advise sessions by undergraduate (UG) and postgraduate (PGR) students in the Department of Physics, by gender and academic year.

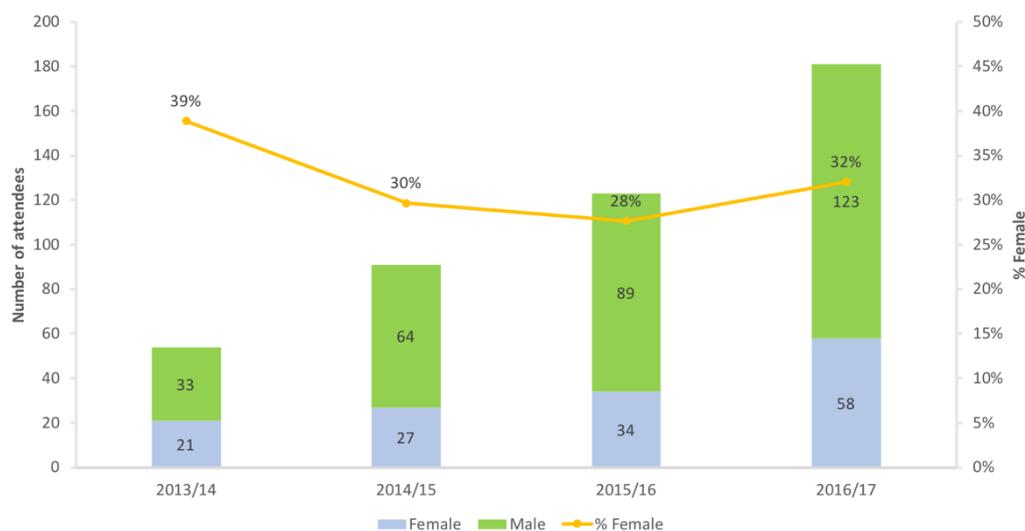


Figure 22: Attendance at PGSkills training courses by postgraduate research students (PGR) in the Department of Physics, by academic year and gender.

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

Comment and reflect on support given to staff who apply for funding and what support is offered to those who are unsuccessful.

Over the review period, 28% of PI grant proposals were submitted by female members of staff. Among successful proposals 33% (in number) had a female PI, accounting for 25% of the awarded grant funding (Table 20). All these percentages are higher than the female representation among academic and research staff.

The University Research and Innovation Services (RIS) provide primary support for grant proposal preparations. The recently instated RIS writing retreats are open to all members of staff, and have seen a steady increase in uptake by women and men (F/M) from July '16 (0/0), January '17 (0/1), July '17 (1/1) to January '18 (2/5). The intensity of feedback and iterations on grant proposals by RIS scales approximately with grant size. The Department operates a complementary internal peer review of grant proposals of any size with feedback provided to support applicants. One (female) Fellow comments: "The guidance and feedback I have received from mentor and other academic staff on things such as grant proposals and fellowship applications has been invaluable. They've provided extensive, constructive comments, giving me a perspective from outside my own research group, and have always been more than happy to help me."

The Departmental Research Committee regularly reviews grant writing activities within the groups, and promotes upcoming grant schemes.

Year	Female	Male	Total (% female)
2013/14	4	18	22 (18%)
2014/15	15	34	49 (31%)
2015/16	15	33	48 (31%)
2016/17	13	34	47 (28%)

Table 20: Number of academic staff in the Department of Physics submitting grant applications as Principle Investigator (PI) by gender and academic year. The same individual can apply to multiple grants in a year.

SILVER APPLICATIONS ONLY

5.4. Career development: professional and support staff

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

Courses offered to PSS include Equality & Diversity as well as Leadership & Management training. The uptake by gender (F/M) over the review period was 3F/1M for 'Diversity in the Workplace Training', 2F/1M for 'Unconscious Bias Training', 2M for 'Leading Teams: Building, Motivating & Developing Staff' and 1M for 'Chairing Recruitment Panels'. The overall uptake remains rather low compared to the overall group size of 16 PSS. While the numbers are low, they suggest a trend where training by women focussed more on EDI aspects whereas leadership training was followed exclusively by men. One survey respondent notes that the Higher Education and Technician's Educational Development (HEaTED) offers useful professional development opportunities for technical staff, but the University has opted out of HEaTED making these courses more expensive and difficult to access. In **Silver Actions** we will work on structures to identify training and career development opportunities for this staff group across the Faculty (**Action 7.3**).

(ii) Appraisal/development review

Describe current appraisal/development review schemes for professional and support staff at all levels and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

Annual SDPRs are held for PSS, to identify learning needs, review objectives and set new ones (see Table 21 for uptake). HR records show a completion rate for the last round of 75% for female and 100% for male PSS. However, our culture survey indicates only 25% of PSS identify the SDPR process as helpful, compared to 64% for academics and 86% for PDRAs. In part this is attributed to the fact that PSS formally fall under Faculty management, whereas they are and feel more integrated at the Department level. Job evaluation of PSS follows the Higher Education Role Analysis (HERA) scheme designed to ensure consistency, transparency and fairness of the process. PSS are largely aware of this process and satisfied with their immediate line management, but they signal structural shortcomings at the Faculty level. **Action 7.3** will target communication and succession planning for technical support staff across the Faculty, including the immediate advertisement for replacements for two members of technical

staff with upcoming retirements by the end of 2018. In addition, the University recently signed up to the Technician Commitment, a university and research institution initiative which aims to ensure visibility, recognition, career development and sustainability for technicians and comes with its own dedicated 2-year action plan.

	2013/14		2014/15		2015/16		2016/17		2017/18	
	Female	Male								
Professional and Support Staff	2	7	2	5	2	5	3	4	3	7

Table 21: Number of appraisals for Professional and Support Staff uploaded to the HR system by gender and academic year.

(iii) Support given to professional and support staff for career progression

Comment and reflect on support given to professional and support staff to assist in their career progression.

Internal and external awards aim to encourage PSS in their career progression. These include the “Recognising Excellence” award at the Faculty level, the “Outstanding Contribution” award managed by the University centrally, and awards by the National Higher Education Technicians summit. An overview of nominations and success rate by gender is presented in Section 5.2(ii). Despite the existence of the above schemes, 83% of PSS survey respondents do not feel the Department/Faculty considers career development for their job family. **Action 7.1** will embed a more systematic consideration of PSS eligible for the above recognitions. Finally, any PSS on fixed-term contracts approaching the end of their term will enter the redeployment register, meaning they are informed of vacancies within the University to which they are eligible before an open call is announced.

5.5. Flexible working and managing career breaks

Note: Present professional and support staff and academic staff data separately

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

Explain what support the department offers to staff before they go on maternity and adoption leave.

Policies and guidance regarding maternity, adoption and parental leave are documented extensively on the University website, and linked to from the Physics Staff Handbook.

Arrangements for maternity leave are made once the line manager and HR advisor are informed. They direct staff to the online HR information on flexible working, keeping in touch days and childcare, and discuss how continuity of teaching, administrative and supervision tasks will be ensured. Time off for antenatal appointments are at full pay and governmental benefit schemes such as the Sure-start maternity grant and Tax Free Childcare scheme are signposted on the same University website. Staff are encouraged to apply early to the campus-based nursery, for which a salary sacrifice scheme (NurseryPlus) is in place.

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

Explain what support the department offers to staff during maternity and adoption leave.

Staff are encouraged to use up to 10 'Keeping in Touch' days at full pay. This facilitates engagement with the research group, PhD student supervision, conferences or planning their return to work. Staff remain on the departmental email lists so that they are naturally invited to any socials taking place during their leave and are kept informed on any news.

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

Explain what support the department offers to staff on return from maternity or adoption leave. Comment on any funding provided to support returning staff.

The return to work can be phased through use of accrued annual leave, flexible working schemes advertised on the HR webpages and linked from the Physics Staff Handbook, or short-term adjustments to the workload allocation. Flexible working schemes include part-time working, flexibility over start and finish times, remote working, term-time only working and job sharing where two people voluntarily share duties. Additionally, a welfare room for nursing mothers is available in the building adjacent to Physics. Recently, the University EDI team produced online guidance to the location of all baby changing facilities and how to book them. DSAT will signpost this resource during the next Department meeting.

(iv) Maternity return rate

Provide data and comment on the maternity return rate in the department. Data of staff whose contracts are not renewed while on maternity leave should be included in the section along with commentary.

SILVER APPLICATIONS ONLY

Provide data and comment on the proportion of staff remaining in post six, 12 and 18 months after return from maternity leave.

No member of academic and research staff or PSS managed by the Department has had maternity leave since 2013/14.

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

Provide data and comment on the uptake of these types of leave by gender and grade. Comment on what the department does to promote and encourage take-up of paternity leave and shared parental leave.

Altogether 4 members of academic and research staff but none of PSS took paternity leave during the review period: 2 in 2013/14, 1 in 2014/15 and 1 in 2015/16. As Case Study 2 illustrates, we encourage staff to take up these types of leave and discuss both in advance and on return to work how the Department can best support them, including any workload issues. The same flexible working schemes outlined in 5.5(iii) are available to staff returning from paternity leave. In one case, a newly arrived probationary Lecturer was not eligible for the official paternity or parental leave schemes which require a minimum employment time, but in consultation with the HoD appropriate work arrangements with extra flexibility were made.

Nobody has taken adoption or shared parental leave.

(vi) Flexible working

Provide information on the flexible working arrangements available.

Between 2013/14 and 2016/17 no academic and research staff or PSS directly managed by the Department made use of flexible working schemes. One technician falling under Faculty management entered 'Flexible Retirement' in 2014. Another technician's request for flexible working was approved in February 2018, to start next academic year. Finally, one academic staff member transitioned from 1 FTE to 0.4 FTE. This concerns a 'Flexible Retirement' that was dealt with as a flexible work request. The lack of uptake by early- and mid-career staff of flexible working arrangements prompts us to advertise the schemes available to academic staff, PSS as well as PDRAs, and start a routine monitoring of awareness as part of our culture survey (**Action 4.3**).

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

Outline what policy and practice exists to support and enable staff who work part-time after a career break to transition back to full-time roles.

Since those currently on flexible working schemes fall under 'Flexible Retirement' a return to full-time work is not envisioned.

5.6. Organisation and culture

(i) Culture

Demonstrate how the department actively considers gender equality and inclusivity. Provide details of how the Athena SWAN Charter principles have been, and will continue to be, embedded into the culture and workings of the department.

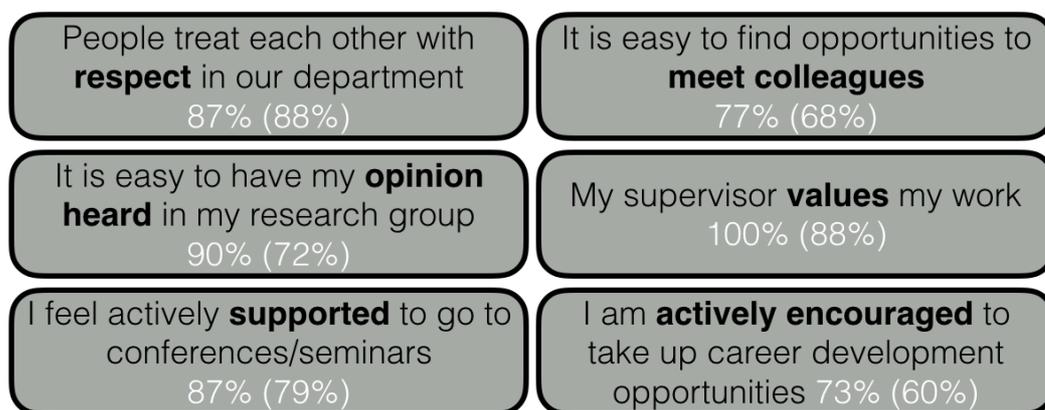


Figure 23: The proportion of PGR students agreeing with the statement made in our workplace culture survey carried out in 2018 (compared with 2014).

95% of academic and research staff, PSS and PGRs subscribe to the statement that they support the aim of Athena SWAN to achieve gender balance in the Department. Only 4 (all of them PGRs) respond negatively. One of them notes that they support the aim if achieved through merit but not through quota.

Figure 23 illustrates a consistently favourable appreciation of departmental culture by the PGR cohort, in several categories 10 - 20% up compared to what was probed during our 2014 survey.

EDI forms a standing agenda item of the Departmental meetings to which both academic & research and PSS are invited. This allows DSAT to report back to the wider Department on monitoring of data, timely topics such as committee structure review, or upcoming events. The latter are also advertised by email to reach a broader cross section of the Department including students, and span internal (e.g., NWP) activities, campus-wide lectures (e.g., on the black student experience, negotiating boundaries, career choices) and external events (e.g., LGBTSTEM day at Airbus or PGR/ECR career sessions by IoP).

[Paragraph omitted due to GDPR protection rules]

This prompted us to formulate **Action 1.1** to enhance communication and transparency and introduce a new role of deputy HoD to facilitate delegation (**Action 1.4**). **Actions 3.1 and 7.3** apply this to the Department's succession planning specifically. The answers to two other questions differed considerably between female and male members of academic staff (Figure 24). Opinions being heard and being treated respectfully is part of professional etiquette and attitudes. It demands first and

foremost awareness. In circulating survey responses DSAT composed an accompanying summary document in which Figure 24 featured prominently. A reflection on the surveys, including this issue, also featured during the November 2018 Department meeting.

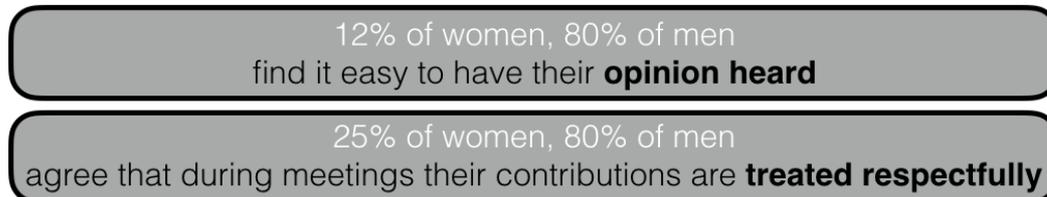


Figure 24: Responses to the academic staff survey 2018 by gender (data not available for other years).

(ii) HR policies

Describe how the department monitors the consistency in application of HR policies for equality, dignity at work, bullying, harassment, grievance and disciplinary processes. Describe actions taken to address any identified differences between policy and practice. Comment on how the department ensures staff with management responsibilities are kept informed and updated on HR policies.

Departmental meetings form the venue for presentation and discussion of HR policies, including those related to staff - student interactions. We invited the #NeverOK project manager to introduce this campaign to challenge 'normalised' behaviours and empower students and staff to speak out against sexual harassment. The discussion was followed by signposting the HR webpages documenting relevant policies. It is widely visible on campus through flyers and posters, supported by the Students' Union and Student Sports Societies alike.

Physics is one of the first two departments to commit to engage all academic, professional services and technical staff to take Bringing in the Bystander Training. Delivered on a monthly basis since October 2018 and completed by 20 staff members thus far, this training encompasses discussion of real case scenarios of sexual harassment, misconduct or assault and couples them with an explanation of University policies and procedures. The training signposts the relevant services for staff (HR via the Employee Assistance Programme) or students (the Student Union Advice Centre and Student Services) subject to or aware of misconduct that can be contacted confidentially.

Within the Department, tutors are the first point of contact for students' concerns. On two occasions the Department's Senior Tutor and DSAT chair circulated to all tutors flowcharts compiled by Student Services explaining how to support students in distress.

Implementation of HR policies within the Department is monitored through annual EDI returns to the University's central EDI team.

(iii) Representation of men and women on committees

Provide data for all department committees broken down by gender and staff type. Identify the most influential committees. Explain how potential committee members are identified and comment on any consideration given to gender equality in the selection of representatives and what the department is doing to address any gender imbalances. Comment on how the issue of ‘committee overload’ is addressed where there are small numbers of women or men.

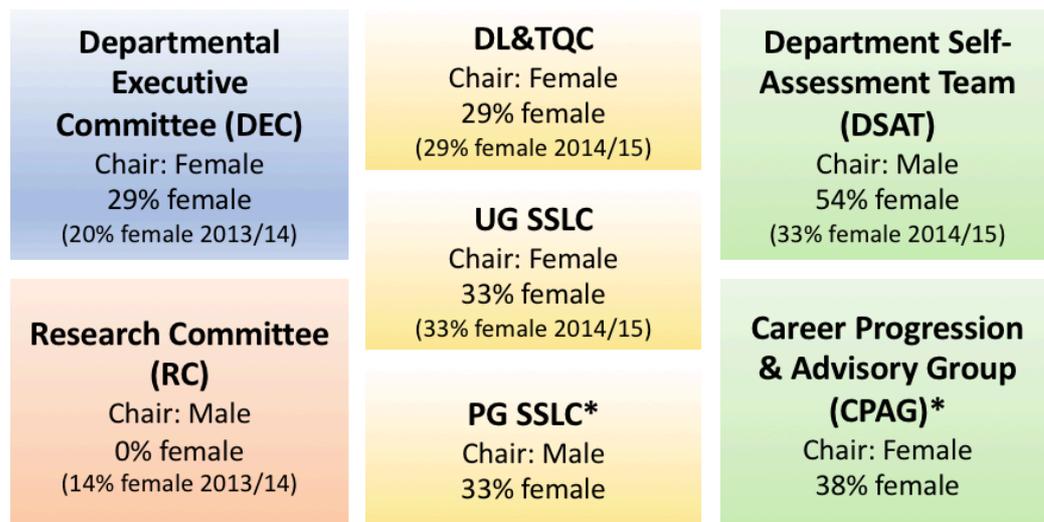


Figure 25: Female representation on committees within the Department of Physics as of 2017/18, contrasted with data from the start of the review period (with * marking committees that did not yet exist). Committees are grouped by function: general management (upper left), research (lower left), teaching (middle: Department Learning and Teaching Quality Committee DL&TQC; UG & PG Staff Student Liaison Committee), Equality & Diversity and career progression (right).

An overview of Departmental committees with gender representation is presented in Figure 25. Our commitment to equality and inclusivity guides the composition of UG-SSLC and PG-SSLC, each reflecting the diversity of our student cohort. In addition, their membership includes a DSAT representative ensuring that EDI is discussed. With the exception of the present Research Committee (RC) composition, all committees have significant gender representation, including the role of chair, whether they are related to management, teaching, equality & diversity or career progression. Membership of the RC is role-based, hence its composition stems from the fact that the Director of Research, the Research Group Leaders as well as Impact and Research Promotion Champions currently are all men. A census of RC composition over a longer period shows that this has not traditionally been the case, and stems in part from one female Group Leader being promoted to HoD. RC decided to add an early career representative in its new composition, which with the current role allocations will restore representation from each gender. DSAT has an open membership structure, with its considerable representation from women reflecting their interest in having a voice in its functioning. The Postgraduate Staff-Student Liaison Committee and Career Progression & Advisory Group have been newly established since our 2015 submission, prompted by our **Bronze Actions**. CPAG's remit and future adjustments to it are detailed in **Action 2.2** and Section 5.1(iii).

DSAT carried out a review of committee structure and concluded that committee membership should be role based, that roles should have finite terms (normally two times three years), and calls for expressions of interest to fill open roles should be circulated accompanied by a role description and person specification. Our hope is that rotation will allow ECRs and among them the significant number of women to more flexibly engage in departmental decision making. The alternative approach of imposing strict gender quota per committee was deemed to be more prone to committee overload for female staff. These principles were discussed and agreed upon during a Department meeting in February 2018. The new approach has been used for some but not all committee vacancies, which has contributed to a reduced satisfaction with transparency of the role and workload allocation.

Action 1.3: Fully implement DSAT's committee structure review recommendations.

(iv) Participation on influential external committees

How are staff encouraged to participate in other influential external committees and what procedures are in place to encourage women (or men if they are underrepresented) to participate in these committees?

Engagement in external review panels, committees or professional bodies are covered in the workload model as part of a standard scholarship allocation. Other than contributing to recognition in the wider research community, they are recognised within the University as part of the promotion criteria. Panel membership ranges from REF and Research Councils to grant and telescope time allocation committees.

(v) Workload model

Describe any workload allocation model in place and what it includes. Comment on ways in which the model is monitored for gender bias and whether it is taken into account at appraisal/development review and in promotion criteria. Comment on the rotation of responsibilities and if staff consider the model to be transparent and fair.

The WLM includes allocations for teaching, research and administration. Externally funded research can boost the fraction of allocated research time compared to the base research scholarship allocation. As a consequence, the relative breakdown between the three pillars of academic life varies significantly from individual to individual. It is however the goal that the total number of allocated hours, summed over teaching, admin and research, is as equal as possible among all members of staff. New probationary staff are 'teaching protected' to support the development of their independent research. Extra time is also allocated for taking on or designing new units. Each year the WLM coordinator circulates a call to all staff for expressions of interest for all teaching and admin duties which are folded into the workload modelling.

The WLM breakdown by gender and year, and compiled over the full review period, is presented in Figures 26 and 27, respectively. On average, women spent more time on administrative tasks (including leadership roles such as HoD and Director of Teaching)

and less on teaching, although it should be kept in mind that the number of women is small.

As a cautionary note, the WLM is of great concern to every member of staff and any hampering of its transparency is therefore immediately reflected in feedback gathered by our survey. Unfortunately, the 2017/18 WLM overview was not distributed among all staff members as per usual. Consequently, 83% of academic staff questioned the transparency of the workload allocation process compared to a minority in our 2014 survey. Abundant open text comments made clear this was attributed to the lack of circulation in 2017/18 and confirmed that the WLM process as followed up to 2016/17 had been fair and transparent. **Action 1.2** will resume this process. In immediate response to the survey feedback, an all-staff meeting was held devoted to outlining the principles behind the WLM and showing how the 2017/18 allocation features a distribution among staff flatter than that for any other Department in the Faculty. The session received an overwhelmingly positive response.

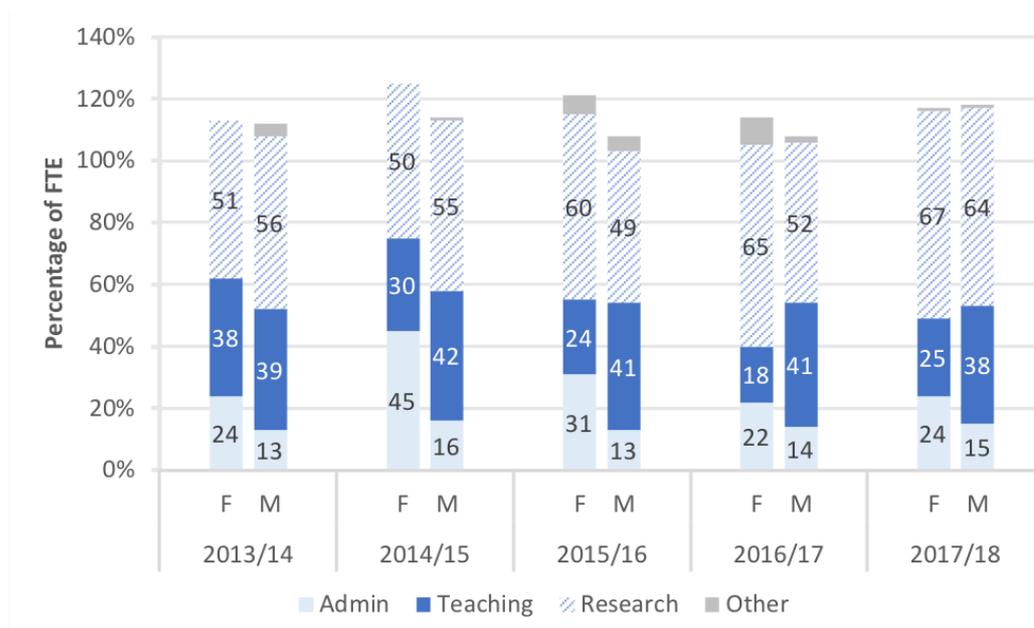


Figure 26: Workload model distribution of academic staff by year and gender, in units of percentage of FTE.

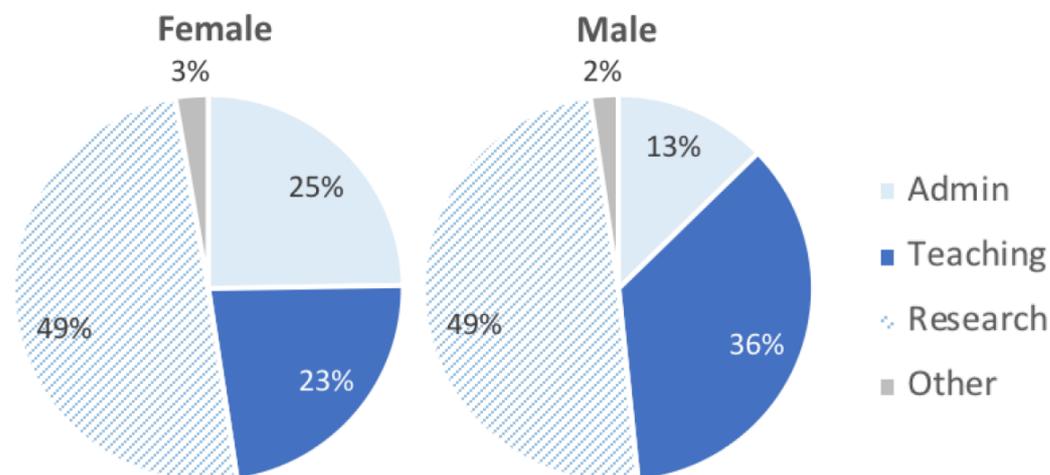


Figure 27: Breakdown of the workload for female and male academic staff, as percentage of total time and averaged over the years 2013/14 – 2017/18.

(vi) Timing of departmental meetings and social gatherings

Describe the consideration given to those with caring responsibilities and part-time staff around the timing of departmental meetings and social gatherings.

86% of academic and research staff agree that key departmental meetings are timed so that everyone can attend, and so does 75% of PSS. Departmental meetings have been scheduled at 4pm and chaired to last at most one hour. Future Department meetings will be scheduled at 14:15, due to considerations of flexible work and childcare responsibilities (**Action 1.1d**). Seminars, committee and research group meetings are typically scheduled early in the afternoon. Tuesday morning coffee takes place at 10am, allowing parents to drop off their kids at school. Socials such as the Welcome Dinner, Christmas get together, International Women's Day social, a summer social and other informal networking events vary between evening, late afternoon and early afternoon timings to serve the varying schedules of Department members. Departmental Away Days for all academic and research staff have been organised in town as well as on campus. While the former can create a stimulating atmosphere away from the daily routine, it was noted that off-campus events, even though restricted to office hours, can be hard to reconcile with childcare commitments.

(vii) Visibility of role models

Describe how the institution builds gender equality into organisation of events. Comment on the gender balance of speakers and chairpersons in seminars, workshops and other relevant activities. Comment on publicity materials, including the department's website and images used.

With much of our student intake (Figure 11) and staff hiring (Figure 20) in terms of gender being limited by the applicant pool, the presentation of our Department to potential internal or external applicants is crucial. 50% of students and researchers in Physics promotion materials are female. **Action 5.5** will also give each PGR individually visibility through an online presence.

Both of the Network of Women in Physics conferences, which featured all female speakers, were advertised widely on campus, online and during Open Days (Figure 28). Figure 29 demonstrates a roughly equal participation by UGs, PGRs and staff, with a 50-50 gender breakdown. Unanimously, all aspects of the event were rated very favourably.



Figure 28: Announcement poster of annual Network for Women in Physics conference (top). Speakers and organising committee of the 2018 NWP Conference (bottom).

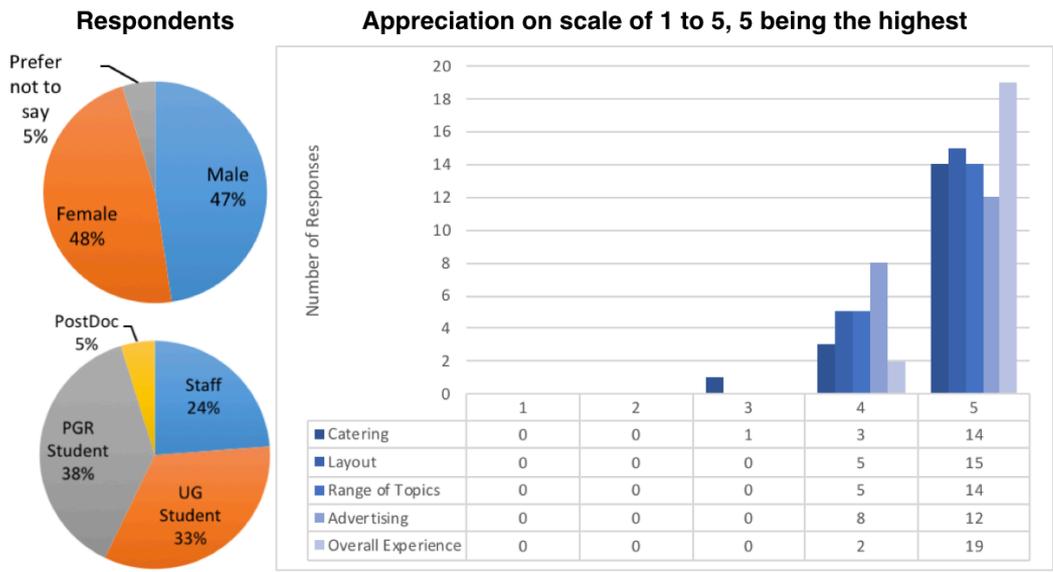


Figure 29: Quantitative feedback received from attendants of the 2018 NWP Conference.

Figure 30 presents a tally of the external speakers invited to our Department over the review period, showing a female representation of 14%. Upon closer inspection, however, female speakers have been invited almost exclusively for the Astrophysics Seminar, organised by the research group with the healthiest gender balance (57% female among staff, 56% overall). This issue has been discussed during the Department meeting, and in response seminar budgets were allocated to groups provided they can demonstrate a gender balance of seminar speakers in line with female representation in the UK sector. Group Leaders have taken on this message, but 5 invited female speakers in the last semester unfortunately declined, or in the case of 3 of them withdrew later on. This may signal a seminar overload similar to the committee overload phenomenon for the overall small number of established women physicists. We intend to continue pursuing this issue pro-actively in the coming academic year (**Action 4.1**). The research lunch series for internal speakers already reflects the gender breakdown of our academic staff. Looking ahead, this internal seminar series will also provide a platform for our PDRAs (**Action 2.4**) while PGRs are initiating their own seminar series for peers (**Action 5.2**).

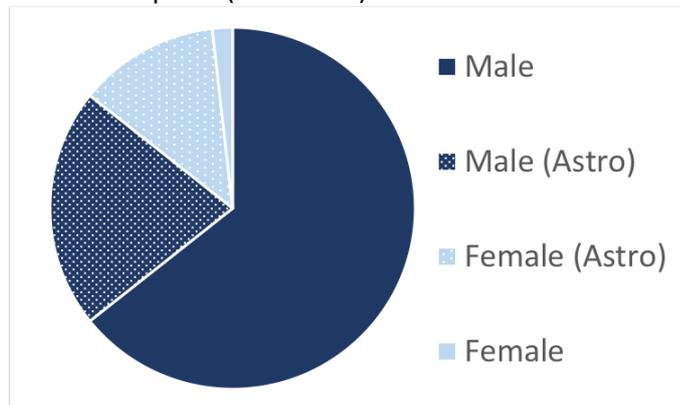


Figure 30: Breakdown by gender of a total of 56 external speakers in Physics seminars and colloquia since 2015. Speckled shading marks the subset of talks delivered as part of the Astrophysics Seminar series.

(viii) Outreach activities

Provide data on the staff and students from the department involved in outreach and engagement activities by gender and grade. How is staff and student contribution to outreach and engagement activities formally recognised?

Comment on the participant uptake of these activities by gender.

A large fraction of PGRs, PDRAs and academic staff (50% of respondents) actively engage in outreach activities (Table 22). These vary from primary school visits to science festivals such as Pint of Science, Bath taps into Science or events hosted by the Royal Society, but also include initiatives originating from individual research groups. Outreach opportunities, particularly targeting schools, are prominently advertised on the Departmental website, and internally events are promoted using a large screen on Physics Square. Table 22 suggests that female members of the Department are consistently overrepresented, especially in activities aimed at schools where we intend to inspire more girls to study Physics. Activities are logged to staff profiles and can be used to address promotion criteria. As part of our commitment to stimulate and inspire children to take up Physics and to increase the proportion of women the Department further hosts a (female) Ogden Science Officer, a role dedicated to school outreach. To

stimulate sharing of good practice, DSAT organised a well attended outreach-themed lunch talk. In 2018 one (male) staff member was awarded the Vice-Chancellor's Award for Public Engagement with Research (Figure 31).

Staff Role	School outreach activities				Public engagement with research			
	Female	Male	%F	% of Respondents	Female	Male	%F	% of Respondents
PGR	7	6	54%	43%	4	9	31%	45%
PDRA	1	0	100%	29%	1	3	25%	86%
Academic	5	7	42%	41%	6	14	30%	72%

Table 22: Number of PGR students and members of academic and research staff by gender participating in outreach activities in the period 2015/16 - 2017/18. Data from workplace culture survey. Four respondents who preferred not to identify their gender are excluded from the gender ratio but included in the % of respondents answering affirmatively.

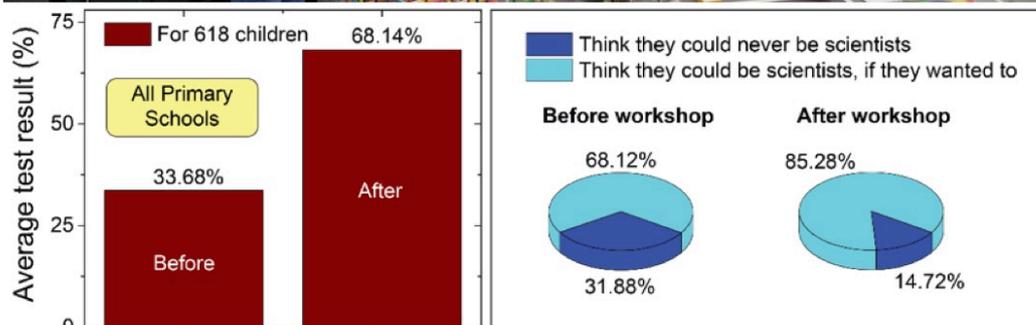


Figure 31: Members of the department's outreach team, with some of the attributes used to bring the physics of light and materials to primary schools (top). Before and after statistics on 618 children, compiled over more than 20 primary school visits, demonstrating improved understanding, confidence and interest of the school children participating in the outreach activity.

[6498 words]

SILVER APPLICATIONS ONLY

6. CASE STUDIES: IMPACT ON INDIVIDUALS 999/1000 WORDS

Recommended word count: Silver 1000 words

Dr Kristina Rusimova (DSAT member)

Dr Marcin Mucha-Kruczynski (external to DSAT)

7. FURTHER INFORMATION 476/500 WORDS

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

Please comment here on any other elements that are relevant to the application.



Figure 32: Wide-spread press coverage on discoveries by female researchers from the Department of Physics in 2017/18.

As a Department we are committed to increasing the proportion of women in Physics as a discipline. We do this by means of outreach activities (Section 5.6(viii)) but also through visibility of role models on campus and in the press.

Figure 32 highlights the international press coverage, just from the last year, on cutting edge scientific discoveries by female researchers in the Department of Physics. The Faculty's professional press office helps preparing PR materials, liaising with the press and eventually compiles a press report which can serve as part of promotion cases.

Combined, press releases by women physicists from our Department received coverage with mention of the University of Bath by over 370 articles across online, print and broadcast media, with dozens of additional stories covering the research findings without mention of Bath. The associated news reach metric was estimated by the press office at over 48 million reads/views, corresponding to an Advertising Value Equivalent of over £1M.

In 2016, a female staff member in Physics was named Woman of the Year at the annual FDM everywoman in Technology Awards. Another FDM recognition, awarded to a (female) Bath Chemist upon nomination from Physics, illustrates we are working across departmental boundaries to ensure that good practice is embedded. Prof Sheila Rowan, who delivered the campus-wide Founders Day Lecture on Gravitational Waves in 2018, was invited by our Department as well. The Athena SWAN Annual Lecture

serves as another occasion putting the spotlight on gender in STEM. The 2018 lecture by Prof Michelle Ryan on 'Uncovering the Glass Cliff: Women's leadership roles in times of crisis' was attended by 7 members of staff (5 women, 2 men; 5 academics, 2 PSS), and Physics registrations for the 2019 Athena SWAN lecture by astronaut Dawn Kernagis are already up compared to previous years. Bath astrophysicists featured in the Wonder Women of Space temporary exhibit at the Herschel Museum, and they initiated the honorary Caroline Herschel Prize Lectureship opened as a national competition in 2018.

Our Department further hosts a member of the UG student community co-chairing the Student Union's LGBT+ Society, a PDRA who co-authored an internationally disseminated best practices guide for LGBT+ Inclusivity in Physics and Astronomy (<https://arxiv.org/pdf/1804.08406.pdf>) and a member of permanent staff who is actively engaged in the Institute of Physics Communicators Group who organised a Pride of Physics meeting in August 2018.

Looking ahead, the Department will host the National Astronomy Meeting, with over 500 participants a unique occasion to put a spotlight on our researchers, junior and senior. As a matter of good practice, we will ask all participants to sign a professional code of conduct upon registration. This to provide a welcoming and safe environment, in line with the Athena SWAN principles.

[476 words]

8. ACTION PLAN

The action plan should present prioritised actions to address the issues identified in this application.

Please present the action plan in the form of a table. For each action define an appropriate success/outcome measure, identify the person/position(s) responsible for the action, and timescales for completion.

The plan should cover current initiatives and your aspirations for the next four years. Actions, and their measures of success, should be Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

See the awards handbook for an example template for an action plan.



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DEPARTMENT OF PHYSICS ATHENA SWAN SILVER AWARD ACTION PLAN 2018 – 2022

ID	Rationale	Proposed Action	Timescale	Responsibility	Success criteria
1. Departmental management (committees, communication, workload allocation)					
1.1a	Enhancing interdepartmental communication: [Omitted due to GDPR protection rules]	<p>i) Establish biannual all-hands meetings for everyone: PGR, PSS and academic & research staff. A big picture overview of the state of the Department and its future with plenty of Q&A time. Presentation slides to be stored on Staff Moodle page as a record of the Department's evolving state and strategy.</p> <p>ii) Measure views on communication through the respective surveys of different groups.</p>	<p>First meeting held in Jan 2019</p> <p>Next upcoming surveys Jun 2019</p>	<p>HoD, Directors of Research & Teaching</p> <p>DSAT</p>	<p>Biannual meeting in place and slides stored on Staff Moodle.</p> <p>Improved appreciation of information flow in survey with 70% of each survey group agreeing there is effective communication in the Department (currently ranging between 27% and 40%).</p>
1.1b	[Omitted due to GDPR protection rules]				
1.1c		Arrivals & leavers e-mail to be sent to PGR, PSS and academic	First e-mail	Departmental Coordinator,	70% of each survey group agreeing there is effective

		& research staff on a quarterly basis, with introduction paragraph by new arrivals.	Dec 2018	newly arriving PGR, PSS & staff	communication in the Department. 80% of PGRs feeling integrated in the Department beyond the level of their own research group.
1.1d		<p>Departmental meetings:</p> <p>i) agenda to be circulated timely with explicit call for agenda items.</p> <p>ii) DSAT to present survey results; specifically gendered response on opinions being heard and treated respectfully.</p> <p>iii) To start 14:15</p>	<p>2018-2022 monthly</p> <p>First departmental discussion on survey results Nov 2018 Nov 2018</p>	<p>HoD, Departmental Coordinator</p> <p>DSAT</p>	100% of both male and female academic and research staff feel valued, respectfully treated and that their opinions are being heard (currently 80% of men but only 63% of female academic staff feel valued within the Department, 25% feel treated respectfully and 12% find it easy to have their opinion heard; Section 5.6(i)).
1.2	<p>Enhancing fairness & transparency of workload allocation:</p> <p>Due to non-circulation of the 2017/18 workload model (WLM) concerns arose regarding the fairness of workload allocations (Section 5.6(v))</p>	<p>i) Continue annual request for preferences regarding teaching & admin.</p> <p>ii) Circulate resulting WLM annually as done pre-2017/18.</p> <p>iii) Repeat all-staff WLM discussion that was initiated in</p>	<p>2018-2022 annually</p> <p>Starting from academic year 2018/19</p> <p>every 2 years</p>	<p>WLM Coordinator</p>	<p>70% of Department agree WLM allocation is fair and transparent.</p> <p>WLM discussion meeting attended by 80% of academic</p>

		response to survey results (i.e., a means to explain the process to new arrivals, refresh memory of others, and inform staff about WLM restructuring by the University centrally).			staff.
1.3	<p>Enhancing transparency & inclusive nature of role allocation and committee membership:</p> <p>Per Bronze Actions DSAT prepared a report reviewing the structure of departmental committees. Changes were proposed to enhance transparency and inclusive nature of role allocation on which committee membership is based. The guiding principles, in line with Athena SWAN, were agreed upon during a Department meeting. Implementation has started, but the process is not yet fully (e.g., rotating terms) and consistently (e.g., calls for each opening role) embedded. See Section 5.6(iii).</p>	<p>Full implementation of DSAT's committee structure review.</p> <p>Specifically, the review proposes committee membership to be role based, with roles being on terms of 3 years with normally no more than one renewal. Newly opening roles would prompt a call for expressions of interest accompanied by a role description and person specification. The committee review also foresees EDI and early career representation on all key committees.</p>	Summer 2019-2022 annually during WLM design for new academic year, plus if roles open up in between	HoD, WLM Coordinator	<p>Representation from different career levels on committees summarised in Figure 21.</p> <p>While the committee review does not propose enforcing gender quota for each committee (mindful of committee overload for women), the rotating nature of roles and open call for expressions of interest should allow gender representation across all decision making committees.</p>

1.4	[Omitted due to GDPR protection rules]	Appointment of a deputy HoD through call for expression of interest, accompanied by role description and person specification.	Open call announced to all academic staff on 15/10/2018	HoD	Deputy HoD in place, and delegated responsibilities made clear to all staff during department meeting.
2. Career support & development (for Early Career Researchers and senior staff)					
2.1	Mentorship programme: While positively evaluated by all those that have a mentor, the uptake among PDRAs remains low at 43% (Section 5.1(ii)).	Mentor coordinator and junior mentor coordinator to discuss option of a mentor with every PDRA and member of academic staff. This consultation serves to poll interest, identify for what areas of academic work mentoring would be most valued, and consequently who would be a suitable choice.	Consultation of every PDRA by end of 2018, continued as new ones arrive.	Mentor & junior mentor coordinator	60% uptake of mentorship scheme among PDRAs and Fellows. Continued positive evaluation of mentorship scheme by those participating (currently 100% positive feedback in PDRA culture survey).
2.2	Staff Development Committee (SDC): Per Bronze Actions a Career Progression Advisory Group (CPAG) was formed and contributed to several successful promotion cases. However, its meetings were infrequent and remit of identifying potential candidates for promotion who may otherwise not step forward	i) Membership of a new SDC to represent all career levels and include mentor coordinators. ii) SDC will focus on raising awareness about the promotion process (promotion criteria, career development opportunities, ...). iii) SDC will not give unsolicited advice but will send out an	2018-2022 quarterly meetings annual call	SDC	100% of staff are aware of promotion criteria, including 100% of female staff. Uptake of SDC's call for feedback on career progress

	had the adverse effect of creating an opaque impression in the perception of others. (Section 5.1(iii))	<p>annual call asking those who want feedback on their career progress to let them know.</p> <p>iv) SDC to monitor uptake of this opportunity by gender.</p>			<p>in line with gender representation in the Department.</p> <p>10 promotion cases submitted over the next Athena SWAN review period, reflecting gender representation in the Department.</p>
2.3	<p>Appraisals:</p> <p>Different appraisal schemes (SDPR for staff and PDRAs, probationary evaluations, Prize Fellows' own scheme), the relatively short (typically 2-3 year) contracts of PDRAs that arrive at different times of year, and inconsistent uploading of appraisal reports to iTrent make the records of appraisal uptake over past years difficult to monitor and potentially incomplete (Section 5.3(ii)). Since SDPR recently also became compulsory for PDRAs, a streamlining of the process would be timely.</p> <p>Additionally, most but not all</p>	<p>i) Schedule SDPRs for PDRAs together with those of other staff in a narrow time window each year (i.e., irrespective of the PDRA starting date). Liaise with HR to guarantee an up-to-date staff list (including PDRAs) is used for this.</p> <p>ii) Instruct reviewers to consistently upload reports to iTrent. At the end of each annual review period, the number of uploaded reports will be reported to DEC, for a more consistent monitoring.</p> <p>iii) All staff (i.e., including Prize Fellows) to be offered the choice of a reviewer alternative to their line</p>	Annually starting Jan 2019	<p>Research Staff Coordinator for SDPR reviews</p> <p>Departmental Exec for staff SDPRs</p>	<p>100% of academic staff and PDRAs complete an annual appraisal.</p> <p>70% of staff and PDRAs agree SDPR is effective in supporting career progression.</p>

	(e.g., Prize Fellows) are given the choice of another reviewer than their line manager.	manager. iv) Reviewers to (re-)take training on conducting an effective review on a 4-yearly basis.	every 4 years		All staff performing appraisals have completed/refreshed training every 4 years.
2.4	Creating an environment conducive to scientific interaction and career success: Research and other academic endeavours inherently are team efforts. Colleagues within the Department are the most immediate potential collaborators and offer resource for sharing of good practice. Facilitating settings for formal and less formal interactions is therefore crucial for the Department's success and that of its members (Section 2).	i) Actively engage PDRAs as speakers in the departmental Research Lunch series. Schedule welcome seminars for new staff shortly after arrival as part of the series. ii) A dedicated, bookable collaborative space has been in use since a year. A refurbishment took place over the summer. Its use is particularly important for ECRs who share office space, to schedule small-group or supervisory meetings and telecons. This kind of space will remain a high priority in future building developments .	New research lunch series starting 24/10/2018, fortnightly Input for new building solicited Spring 2019. First moves 2020.	Research promotion champion HoD	All PDRAs, Fellows and newly arriving probationary lecturers delivered a Research Lunch talk. Collaborative journal publications. A networking space allocated in the Department's new building plans.
3. Recruitment					
3.1	Align departmental strategy with changing UK funding	Formulate a departmental policy regarding search for and process to internally select	Start 2019 (to be in place well before	Director of Research via Research	Report on departmental policy for new staff recruitment through the UKRI

	<p>landscape:</p> <p>With the establishment of UKRI and specifically its recently instated Future Leaders Fellowship scheme which requires Universities to offer proleptic lectureship contracts, the way in which many new members of academic staff are recruited may change significantly (e.g., from a selection process that is mostly internal to the Department to an external selection by UKRI). See Section 5.6(i).</p>	<p>and/or prioritise candidates for the UKRI Future Leaders scheme. This should be a two-step process, starting with an open discussion during a Department meeting, followed by a written report to be posted on the Staff Moodle page.</p>	<p>next upcoming call)</p>	<p>Committee</p>	<p>Future Leaders scheme posted on Staff Moodle.</p> <p>At least one candidate to be nominated for each call.</p>
3.2	<p>Recruitment panel composition in terms of gender breakdown and checks on take-up of required training are not systematically recorded or monitored. This applies specifically also to postdoctoral recruitment (Section 5.1(i)).</p>	<p>Liaise with HR to record and monitor panel composition, in the form of an annual report provided to DSAT.</p> <p>Follow up with research group in case of missing training uptake or single gender panels.</p>	<p>First report May 2019</p>	<p>DSAT, HR</p>	<p>100% unconscious bias training for all panellists, also for postdoctoral recruitment.</p> <p>Representation of each gender for all recruitment, including postdoctoral positions.</p>
3.3	<p>Gender statistics in recruitment:</p> <p>While showing a gender-balanced intake overall, Figure 21 may suggest a difference in starting grade between men and</p>	<p>i) Annual monitoring of staff recruitment statistics by gender and grade.</p>	<p>Oct 2019, Oct 2021, Oct 2022</p>	<p>DSAT</p>	<p>Percentage of female applicants in line with the UK average for the sector (at least 20% across academic positions)</p>

	women among new additions to the academic staff. Figure 20 on the other hand indicates that female applicants, if anything, do better in the selection process (Section 5.1(i)).	ii) Continue advertising new positions pro-actively to potential female candidates on an individual basis, and through networks.	As new positions open up	Search champion	
4. Departmental culture					
4.1	External colloquium & seminar speakers: Our Athena SWAN analysis revealed a gender bias in externally invited speakers for the departmental colloquium and several seminar series. Since those speakers act as role models to particularly the younger audience (PGR and for some seminars also including UG students) it is important to rectify this trend (Section 5.6(vii))	i) Departmental financial support for seminars tied to a gender-balanced list of invited speakers (i.e., at least representative for the field). Enhancing the diversity of speakers in a broader sense than gender will also be acknowledged. ii) Research group leaders and colloquium organiser to report speaker list annually to DSAT for monitoring purposes.	First report on speakers statistics Jul 2019, repeating annually thereafter	Research group leaders, colloquium organiser	Increase the representation of women among external speakers across departmental colloquia and seminars to at least 20%.
4.2	Socials and informal networking: Several survey respondents comment they want more social activities. A few PSS and (foreign) PGRs feel such activities are not equally welcoming to	i) Establish a Physics Social Society through an open call to all staff (academic, research and PSS) and PGRs. ii) The Physics Social Society will take responsibility over organising the Department's	Open call for participation in Physics Social Society in Nov 2018.	DSAT announcing call Physics Social Society	Socials attended by a large cross section (70%) of the Department, including PGRs and Professional & Support staff. 80% of all surveyed groups indicating a positive

	everyone. At present, the organisation of socials relies heavily on the Department Coordinator.	Christmas social, and a family-friendly summer social. A first summer social was organised more impromptu by DSAT in immediate response to the requests for more social and inclusive interactions (invitations were extended to PGRs, PDRAs and Professional & Support staff explicitly).			evaluation of the Department's social cohesion.
4.3	Flexible working: The low uptake of available flexible working schemes prompts the question whether (especially early- and mid-career) staff are aware of the options. In the current survey this was only asked from PSS with 50% indicating awareness.	Invite HR to Department meeting to explain the available flexible working schemes. Start monitoring awareness on flexible working across academic and research staff as well as PSS.	Spring 2019 Next survey Jun 2019	HR via DSAT invitation DSAT	70% of survey respondents indicate a satisfactory understanding of flexible working schemes
5. Postgraduate students					
5.1	PhD peer mentorship Scheme has been initiated per Bronze Actions, forms a valuable complement to the induction week by the Doctoral College, but PGR survey respondents indicate it lacks in regularity of	PG-SSLC to send out regular announcements of a mentor-mentee meeting day.	every 2 months, starting Jan 2019	PG-SSLC	60% of PGRs find the mentorship scheme helpful.

	mentor-mentee meetings later in the PhD programme (Section 5.3(iv)).				
5.2	<p>Building department-wide cohesion between PGRs</p> <p>PGR students speak favourably about their interactions with supervisor(s) and members of their research group. Initiatives to engage them at a Department-wide level would be welcome.</p>	<p>PGRs will be invited to a biannual departmental all-hands meeting (Action 1.1)</p> <p>A PGR seminar series starting next academic year will serve to build cohort spirit, reduce the occasional feeling of isolation beyond interaction with the supervisor, and offer an opportunity for public speaking practice. Talks are held among PGRs internally to keep the threshold low, with rotating presence of one staff member to give feedback if desired.</p>	<p>Jan 2019, repeated biannually</p> <p>monthly</p>	<p>HoD</p> <p>PGR member of PG-SSLC</p>	<p>PGR attendance from each Research Group. Increased number of PGRs feeling well informed about departmental issues.</p> <p>Well attended seminar series. Frequent requests for feedback from attending staff member.</p>
5.3	<p>PGR arrival</p> <p>While the Doctoral College and PGR peer mentorship scheme together provide helpful induction, consultation of PG-SSLC revealed a departmental</p>	<p>Establish departmental PGR induction session informing new arrivals about Health & Safety, how to order things, public engagement and EDI. This includes signposting the</p>	<p>First edition Autumn 2018 annually</p>	<p>PG DoS via PG-SSLC with help of Health & Safety and EDI officers</p>	<p>100% uptake by newly starting PGRs.</p>

	induction providing a basic “who, what and where in the Department” is currently missing, leading also to repeated questions to the Departmental Coordinator (Section 5.3(iv)).	appropriate support channels should issues with the supervisory team arise.			
5.4	PGR departure PGR experience and destination information are not systematically recorded upon completion of the programme (Section 5.3(iv)).	Compose exit sheet with both backward- and forward-looking questions to be completed by PGRs upon thesis submission.	Jan 2019	PG DoS	Database with PGR reflections and first destination information to be analysed. Adjust PGR induction or career sessions if prompted by this analysis.
5.5	PGR visibility to outside world PGR students have not had a web presence except occasionally on the initiative of individual supervisors. An increased web presence can increase their chances of being allocated conference talks or seminar invitations, and improve their chances on the job market (Section 5.6(vii)).	Departmental webpages are currently being revamped following a University-wide new format. Ensure PGRs to have a web presence alongside other Research Group members with name, photo and research interests.	By June 2019, and updated as new PGRs arrive.	Research Group leaders	All Research Group webpages to comply with Action.
6. Undergraduate students					
6.1	Recruitment There is tentative evidence for	Continue to review recruitment statistics and practices to ensure gender	From Jun 2019 (first Open Day),	UG admissions tutor	25% female UG applicants and starters.

	gender differentiation in enrolment for BSc vs MPhys/MSci programs, and potentially programmes with vs without Astro.	representation in line with the Department and highlighting of the Department's diversity at Open Days and online.	annually		
6.2	<p>Outreach and widening participation</p> <p>Since the primary limiting factor in recruiting a diverse UG population into Physics is the gender breakdown and ethnic diversity (BME percentage) of the potential applicant pool (i.e., school children taking A levels in STEMM) our Department is committed to engage in outreach and widening participation involving schools (Section 4.1(ii) and 5.6(viii)).</p>	Combine the various outreach and public engagement activities within the Department under one umbrella coordinated by the Public Engagement Working Group , who annually advertise their school activities and solicit participation from UGs, PGRs and academic and research staff alike.	2019-2022 Quarterly working group meetings	Ogden Science Officer with Public Engagement Working Group	25% female UG applicants and starters. Engagement in outreach activities from UG to staff with a gender breakdown representative for the Department.
7. Professional & support staff					
7.1	<p>Enhancing recognition of Professional & Support staff</p> <p>While most PSS fall under line management of the Faculty, the Department can contribute more to acknowledge and recognise their technical and</p>	<p>Consider all PSS eligible for "Outstanding Contribution" award for nomination.</p> <p>Encourage acknowledgments or co-authorship in journal publications where relevant contributions are made by</p>		<p>Faculty line manager</p> <p>Research Group leaders</p>	<p>At least one eligible PSS to be nominated each year.</p> <p>Visibility technical staff in journal publications.</p> <p>70% of PSS feeling integrated</p>

	administrative support (Section 5.2(ii)).	technical support staff.			in the Department.
7.2	<p>Treating PSS respectfully and as full members of Department</p> <p>Only 42% of PSS report departmental social activities, team building or networking events are equally welcoming to everyone.</p> <p>One PSS complains about responsiveness from academic staff to e-mail.</p>	<p>Consistently include technical and administrative support staff in invitations to departmental socials (e.g., Christmas and summer social), as they already are to Department meetings.</p> <p>Bring comment to the attention of academic staff in summary of survey results.</p>	<p>2018-2022 as occasions come along</p> <p>summer 2018 Department meeting</p>	<p>DSAT, Physics Social Society</p>	<p>80% of PSS feeling welcomed to social and networking events.</p> <p>100% of PSS feeling treated respectfully.</p>
7.3	<p>Communication with Faculty line management</p> <p>Some PSS expressed difficulties in obtaining approval for training, concerns regarding succession planning and the University opting out of HEaTED.</p>	<p>Department Technical Manager to liaise with Faculty on succession planning, including the advertisement of two imminent replacements.</p> <p>DSAT to report summary of survey results on PSS training (including HEaTED membership) to Director of Faculty Technical Services and Dean.</p>	<p>Nov 2018 ad to replace two PSS leaving end 2018.</p> <p>Oct 2018</p>	<p>Dean, Faculty line manager</p> <p>DSAT</p>	<p>60% of PSS indicate the Department/Faculty considers succession planning for their job family (currently 8%).</p> <p>Increase uptake of training opportunities by 30%.</p>