



Department Application 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	Bronze	Silver
Word limit	10,500	12,000
<i>Recommended word count</i>		
1. Letter of endorsement	500	500
2. Description of the department	500	500
3. Self-assessment process	1,000	1,000
4. Picture of the department	2,000	2,000
5. Supporting and advancing women's careers	6,000	6,500
6. Case studies	n/a	1,000
7. Further information	500	500

GLOSSARY OF TERMS

BUAFTA: Birmingham University Awards for Tremendous Achievement

CERN: European Organization for Nuclear Research

CPAG: College Post Approval Group

DLHE: Destinations of Leavers from Higher Education

E&DC: Equality and Diversity Committee

EPS: College of Engineering and Physics Sciences

FRS: Fellow of the Royal Society

FTE: Full Time Equivalent

FT: Full Time

HE: Higher Education

HESA: Higher Education Statistics Agency

HiSPARC: High-School Project on Astrophysics Research with Cosmics

HoS: Head of School

ICWIP: International Conference on Women in Physics

ILM: Institute of Leadership and Management

IPPP: Institute for Particle Physics Phenomenology

IUPAP: International Union of Pure and Applied Physics

LFHE: Leadership Foundation for Higher Education

MPAG: Midlands Physics Alliance Graduate

MPAGS: Midlands Physics Alliance Graduate School

NDAWM: Nuclear Decommissioning and Waste Management

PDR: Performance and Development Review

POD: People and Organizational Development

PG: Postgraduate

PGR: Postgraduate Research

PGT: Postgraduate Taught

PPAN: Particle Physics, Astronomy and Nuclear Physics Advisory Panels

PPRP: Projects Peer Review Panel

PT: Part Time

PTNR: Physics and Technology of Nuclear Reactors

RG: Russell Group

RS: Rest of the Sector

SL: Senior Lecturer

SRF: Senior Research Fellow

STEMM: Science, Technology, Engineering, Mathematics and Medicine

STFC: Science and Technology Facilities Council

TT: Teaching Technician

UG: Undergraduate

WAM: Workload Allocation Model

Name of institution	University of Birmingham	
Department	School of Physics and Astronomy	
Focus of department	STEMM	
Date of application	18/5/2018	
Award Level		Silver
Institution Athena SWAN award	Date: Nov 2014	Level: Bronze
Contact for application <small>Must be based in the department</small>	Prof Cristina Lazzeroni	
Email	c.lazzeroni@bham.ac.uk	
Telephone	0121 4144614	
Departmental website	https://www.birmingham.ac.uk/schools/physics	

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT

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.

Letter of Endorsement from Head of Department



Prof Martin Freer
School of Physics and Astronomy,
University of Birmingham,
Edgbaston
Birmingham
B15 2TT
Tel: 0121 414 4565
Email: M.Freer@bham.ac.uk

Assessment Panel,

Physics and Astronomy achieved the Athena SWAN silver award and Institute of Physics Juno Champion Status in 2014. This marked a longstanding engagement of the School with the Juno initiative dating from 2007. The Head of School at the time observed "The Juno process has been transformative for the School of Physics and Astronomy over the past few years. It has made a tangible and very positive difference to the way we think about all aspects of School life."

I would like to think that the School has continued in that tradition, and it has been personally important to me that women are not only successful, that we recruit talented females at all levels but above all that the working environment of the School is fair, flexible and recognises the need for equality and is effective in eradicating harassment.

I am very proud of the strong programme of activities raising the profile of women through Role Model talks (some which I organised and attended many), workshops to develop leadership skills of female UG and PG students (I am helping with the organisation in 2018), development of a maternity group (involving my wife), and the hosting of the 2017 IUPAP International Conference on Women in Physics, attending many of the sessions. The School E&D Committee, which has representatives from all levels within the School, has continued to be an essential component in shaping the culture and is seen as a point of excellence within the College and University. There is a culture of flexible working which I have personally championed by encouraging an increased number of staff to work part-time (over 15% of the staff have flexible working agreements, i.e. doubled since 2014) and Athena SWAN principles are an integral part of the way the School operates. Although there has been progress, remaining challenges need to be addressed to sustain growth in success of women at all levels in the School, particularly in PhD student recruitment.

When I took over as Head in 2015, there was palpable enthusiasm and determination to embed a gender sensitive culture within the School. I believe we have been able to build on those foundations and the trajectory of change has continued to be positive. I have a strong personal interest, linked to a complex home life, 9 children of various ages, and 3 of eldest daughters have been through the University system as graduates of Physics, Biology and Natural Sciences with one completing her PhD and a further exploring that direction. Clearly, it is important to me that we have systems and processes that promote opportunity for all at every level.

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

[459 words]

Yours sincerely,

Professor Martin Freer, Head of the School of Physics and Astronomy

2. DESCRIPTION OF THE DEPARTMENT

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 School of Physics and Astronomy sits within the College of Engineering and Physical Sciences (EPS). EPS is one of 5 Colleges within the University of Birmingham (UoB). As of 2016/17 the School of Physics and Astronomy is a department of 64 academic staff (14%F), 70 research staff (17%F), 610 undergraduates (23%F), 40 PGT students and 120 PGR students (19%F).

The School has a range of research activities, which include the following major research themes: astronomy, chemical physics, condensed matter experiment and theory, gravitational waves, helio- and asteroseismology, metamaterials, nanophysics, pure and applied nuclear physics, particle physics and ultra-cold atoms. The two research themes of metamaterials and ultra-cold atoms are recent additions to the portfolio in the last 10 years. The School hosts one of the 4 UK Quantum Technology Hubs aimed at translating quantum physics into quantum sensors, in collaboration with a number of industry and business partners.

The School is spread across 5 buildings. These contain the School's research facilities, lecture theatres, teaching laboratories, undergraduate computing laboratories, study and social spaces. The research group structure is essential to the School as it provides the local community and each group has its own social/communal space.

There are 5 undergraduate degree programmes in: Physics, Physics and Astrophysics, Physics and Particle Physics and Cosmology, Theoretical Physics and Theoretical Physics and Applied Mathematics (joint with Mathematics). These are offered at both BSc and MSci levels; there are also possibilities of an intercalated year in Computer Science, and Physics with a year of international study for many of the programmes.

There is no explicit Physics Foundation programme, rather one which is delivered across the College. The foundation year is for students who don't have the required A-levels (i.e. missing Physics or Maths A-levels). The A2B scheme supports local students who have little or no previous engagement with higher education. These routes help female students access physics programmes as, for example, girls are more likely not to have both Physics and Maths A-level. At postgraduate level there are two PGT Masters programmes: the long-standing Physics and Technology of Nuclear Reactors (PTNR), and the more recently established Nuclear Decommissioning and Waste Management

(NDAWM). There is also a thriving PGR programme. Applications for all these programmes typically exceed 1000 students.

Progresses as a result of JUNO Champion actions:

- Increased fraction of female staff (from 5 in 2013 to 9 in 2016/17 to 11 in 2018);
- Steadily growth in female UG (from 18% in 2013 to 24% in 2016/17);
- Increased promotion rate of female staff (from 1 female professor in 2013 to 3 in 2017 to 4 in 2018);
- Increased flexibility; people on flexible working doubled in 5 years);
- Gender balance of 50%-50% in Colloquium speakers;
- Being the first School to address the lack of baby changing rooms and gender-neutral toilets;
- Taking the lead in the College to include ED training in all new staff and most notably in the PG induction;
- Prevention of harassment and violence particularly involving female staff/students.

[section 2 = 494 words]

3. THE SELF-ASSESSMENT PROCESS

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

Describe the self-assessment process. This should include:

- (i) a description of the self-assessment team

The self-assessment team (SAT) spans a breadth of experience and roles within the School. The strength and effectiveness of our SAT reside mainly in that the core members are also members of the Equality and Diversity Committee (E&DC) and as such they have a complete overview of the Equality and Diversity (E&D) related work in the Department and of the progress in the action plan from the previous award. The SAT is enhanced by the presence of 3 other members, from outside the E&DC, outside the School and outside the University, to provide an independent view. The SAT members are:

Member	Role	SAT Role	Relevant experience
Prof. Cristina Lazzeroni 	Professor of Particle Physics. Chair of E&DC	Main writing team	Physics rep at College E&DC. Public Engagement lead for Physics, working with girls schools in the West Midlands. Flexible working.

<p>Prof. Nicola Wilkin</p> 	<p>College Director of Education E&DC member</p>	<p>Main writing team</p>	<p>Previous Athena Swan/JUNO Champion lead. Nicola has a leading role within the University championing the E&D agenda.</p>
<p>Ms Anna Jenkin</p> 	<p>Operation Manager EDC member</p>	<p>Main writing team</p>	<p>Professional Services (HR, Finance, Administrative). Line manager. Responsible for professional services within the school and oversight of their development.</p>
<p>Prof. Martin Freer</p> 	<p>Head of School</p>	<p>Independent from E&DC Main writing team</p>	<p>Overall responsibility for School E&D. Personal perspective, as father of 9 children (3 girls in University STEM areas, 2 physics).</p>
<p>Dr Vincent Boyer</p> 	<p>Lecturer E&DC member</p>	<p>Maternity and Paternity expert</p>	<p>Paternity leaver. Head of the third year of UG programme; insight into the student challenges in the last UG years.</p>
<p>Dr Philip Ilten</p> 	<p>Lecturer E&DC member</p>	<p>Department E&D web page. Inventory of E&D events and good practice examples.</p>	<p>First child born recently, went through appointment system recently.</p>
<p>Dr Sean McGee</p>	<p>Lecturer E&DC member</p>	<p>Survey and focus groups analyst</p>	<p>Junior academic staff perspective; has supervised female students who have</p>

			experienced challenges in their PhDs.
Dr Warrick Ball 	Research Fellow E&DC member	RA network coordinator	RA focus groups. This community is a vital one within the School, whose voices the SAT were keen to include.
Prof. Jon Binner 	Deputy Head of College	Reviewer	College E&DC Chair. Very strong advocate of E&D issues within the College and University.
Prof. Averil MacDonald 	Emeritus Professor in Science Engagement, University of Reading	Reviewer	Chair of the Expert Group for Women in Science. Pioneer of E&D activities to promote women's careers advancement in science.

(ii) an account of the self-assessment process

Following 2014 the core activities and the implementation of the Action Plan were absorbed into those of the E&D Committee, which has resulted in a number of positive changes for the School. The E&DC and the School developed **departmental survey and focus groups** for all staff to capture a snapshot of the work environment and attitude towards gender balance and factors affecting it.

The E&D committee focussed on the renewal of the Athena SWAN award over the last 12 months and more recently augmented a team of core E&D members with 3 other members from the School, College and outside the University to form the SAT. Within this, there was a core team responsible for the writing process.

The core SAT met from January 2018, mostly weekly but with increasing frequency towards the submission date, with a total of 25 meetings held. Meetings have been held in within working hours and the days of meetings varied to accommodate flexible working necessities. Additional meetings took place between individuals working on specific projects/sections of the application.

The SAT has been responsible for developing the Department application, including: analysis of data; specific consultations (surveys, focus groups; result of surveys showed at School meetings, and/or discussed with reps of relevant bodies); identifying areas of good practice; writing and reviewing drafts of the application and action plan; liaising with female members of the School to collect further feedback and suggestions. Individual members of the SAT took on responsibility for sections of the application most relevant to their areas of expertise; specifically the HoS, Chair of E&D Committee and School Operations Manager were responsible for writing the bulk of the document. The members of the E&D Committee provided other key areas of input: Dr Ilten was the steward of School's E&D web pages and collated good practice examples; Dr McGee took care of the staff survey and focus group lead and data analysis; and Dr Ball provided input into the document from the post-doctoral perspectives. Staff was kept informed of the process at School meetings and via bulletin news.

Prof Binner provided reflections on the document given his detailed knowledge of the ED activities within the School, College and University. Prof Macdonald not only facilitated some of the staff development activities, but also helped shape the document using her considerable experience from working in E&D.

Data analysis and consultations (University, Department and research groups surveys; feedback from events; consultation with individuals stakeholders) were used to inform the action plan, as well as a detailed reflection process on the previous action plan from the JUNO Champion/Athena Swan Silver award. In particular the SAT concluded that:

- A robust organisational framework to deliver quality of opportunity and reward had been established and embedded in the School, with commitment from senior management (completed);
- Effective communication, monitoring, evaluation and reporting mechanisms such as surveys, focus groups, induction packs, online documentation which have been successfully implemented but need continuous refining (ongoing);
- Staff contribution to E&D had been clearly accounted for, including recognition of people effort as part of the Work Allocation Model (WAM), which also include administrative, Outreach and Welfare activities; the allocation is transparent to all (completed);
- Data for UG, PG, staff and PS have been collected consistently for a variety of data type, including applications, shortlisting, intake/appointments, promotions/degree classifications, leavers; action will be continued and refined (continue);

- Appointment and selection processes had taken steps into being fully inclusive: career breaks are taken into consideration; gender awareness is included in training of all School members. Still further steps are needed (ongoing);
- Positive actions have been taken to encourage females to apply for jobs or PG positions (search committees to identify potential female candidates; inclusion of at least one female candidate in shortlist); still more effort is needed (ongoing);
- Steps towards establishing structures and systems which support and encourage progression of all staff have been taken: new appraisal system (Progress and Development Review, PRD) for all personnel, mentoring schemes, leadership courses and promotion workshops, support for grant/personal fellowship applications. Still, more effort is needed particularly for Research Fellows (ongoing);
- An inclusive culture has been promoted: consultations, E&D postcards, social events and networks, cultural and gender awareness, gender balance in colloquium speakers, inclusive publicity images and text; this will continue and be refined in the future (ongoing);
- Flexible approaches have been promoted, that enable individuals to optimise their contribution to the School; examples are flexible working pattern, maternity and paternity leave and returns from career breaks, maternity network meetings (ongoing).
- Newly identified issues were added to the Action Plan

I recently joined the School of Physics, University of Birmingham. [...] I found a strong element of collegiality, which I believe it is very important for supporting and allowing under-represented groups to reach their full potential. Members of the staff are approachable, friendly and easy to exchange ideas. There is a real sense of mutual respect. **Angela Demetriadou**

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

Following the submission of this application the SAT will reintegrate into the E&DC, and will respond to issues resulting from the action plan. This approach was effective in ensuring the successful delivery of the Athena SWAN Silver Award Action Plan following in 2014. The E&DC has the delegated authority, with the HoD personal support, to implement the action plan, which in practice means that the committee can require a response/action from all School committees, to make any changes that are required to facilitate the culture change that is sought. The inevitable turnover of team members will be addressed by ensuring sufficient continuity of the team and balance of the committee in terms of School roles and gender.

ACTION: Follow progress on Action and report to University and School bodies (A1).

[section 3 = 1031 words total]

4. A PICTURE OF THE DEPARTMENT

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

The Head of School is Professor Martin Freer. The School has an Operations Manager (Anna Jenkin), a Technical Manager responsible for the buildings and estate (Tendai Makuwatsine), a Head of Teaching Technicians (Avril Rogers), and a Head of the Education Support Office (Kelly Chilton-Davies/Jennifer Clerici). In addition to direct student support, there is a Senior Tutor (Dave Forest) and Wellbeing Officer (Natalie Jordan), Postgraduate Welfare Officer (Ian Stevens), together with 4 heads of year (Wolfgang Theis, Elizabeth Blackburn, Vincent Boyer and Clive Speake). The School is managed by committees (Figure 1), which divide into strategy and operations.



Figure 1. School committee structures as of 2018.

The Senior Management Team meets monthly (8M/2F). School Committee meetings occur 4 times a year and are open for the School's academic, research, technical and administrative staff to receive updates, discuss and develop ideas. E&D is a standing item on the agenda for these committees. The E&D, Teaching and Learning, Syllabus, Health & Safety and Postgraduate Studies committees typically meet quarterly with minutes circulated through the Schools Canvas pages. The Staff Student Committee ensures student engagement with the School. It is co-chaired by the Head Student Rep and the HoS and is attended by most staff in leadership or coordination roles, and the student reps (50%F) from all programmes, degree years and student societies. E&D is a standing item on the agenda for this committee.

The research group structure provides local identity, generation of collaborative research, mentoring, career development and promotion advice, as well as many social activities. As such, the Heads of Group have a key function within the School and are part of the Senior Management Team.

The E&DC monitors, assesses and acts upon gender and equality issues within the School. Posters with member's details are on display across the School.

Since the award of the Athena SWAN silver, the School has instigated a series of activities, with impact on the College, regional area and internationally:

- Training in Cultural Awareness
- Holding leadership workshops for physics UG and PG female students
- Hosting of the International Women in Physics Conference in 2017
- Providing role model talks with external invited speakers.

[355 words]

Please contact one of us in person or via email if you have any queries or suggestions. If you would like to attend our meetings please email physics-edc@contacts.bham.ac.uk

 Dr Warrick Ball Research Fellow	 Dr Vincent Boyer Lecturer	 Jennifer Clerici Education Support Team Manager	 Sayyada Dharsee UG Student	 Elise Dixon UG Student
 Eleanor Fraggley PhD student	 Dr Kat Grover UG Admissions Tutor	 Lorenza Iacobuzio PhD Student	 Dr Phil Iltis Birmingham Fellow	 Anna Jenkin School Operations Manager
 Dr Anna Kowalczyk Research Associate	 Prof Cristina Lazzaroni Professor in Particle Physics E&D CHAIR	 Dr Sean McGee Lecturer in Astrophysics	 Dr Maria Pavlidou Wellbeing Tutor & School Liaison Officer	 Dr Tony Price Lecturer in Medical Applications of Accelerators
 Avril Rogers UG Lab Team Leader	 Dr Ian Stevens Senior Lecturer	 Prof Nicola Wilkin Professor of Physics JUNO LEAD		 

physics-edc@contacts.bham.ac.uk

www.bham.ac.uk/collaboration/equality



2017 IUPAP International Conference on Women in Physics

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

Table 1: Foundation and A2B students

	2012/13	2013/14	2014/15	2015/16	2016/17
Foundation, Male	1	4	7	4	2
(Finished/Continued)	(0)	(4)	(3)	(2)	(2)
Foundation, Female	0	2	1	2	1
(Finished/Continued)	(0)	(1)	(1)	(2)	(1)
A2B, Male	3	3	1	2	1
(Finished/Continued)	(3)	(3)	(1)	(2)	(1)
A2B, Female	0	0	0	1	2
(Finished/Continued)	(0)	(0)	(0)	(1)	(2)

A few students per year pass from the College-run foundation year and University A2B scheme to the Physics programmes (30%F). These routes provide the opportunity for female students who do not have Maths and Physics A-level to access the Physics degree programme. **There is no bias of gender, neither in the progression to physics nor in the retention (Table 1).** Over the period, the retention is 61% for male and 83% for female students for the foundation programme, and 100% retention for the A2B scheme. Of the 8 (7M/1F) leavers in the foundation programme, 3 transferred to a different University course.

[101 words]

ACTION: The School will market the foundation/A2B opportunities more strongly with local girls schools – target of 50% more girls schools by 2022 (A2).

(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.

Table 2: Number, and percentage of UG by gender

Year	Female	Male	Female	Male
2012/13	94	421	18.3%	81.7%
2013/14	114	454	20.1%	79.9%
2014/15	129	480	21.2%	78.8%
2015/16	134	473	22.1%	77.9%
2016/17	145	471	23.5%	76.5%

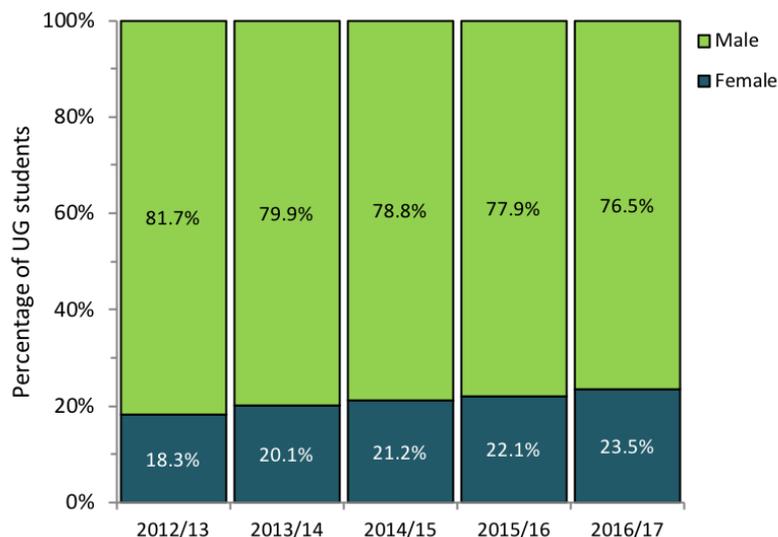


Figure 2. Percentage of UG students by gender, from 2012/13 to 2016/17.

The UG student population (Figure/Table 2) has steadily grown, from 515 students in 2012/13 to 610 in 2017/18. **The ratio of female to total students remains near 20% in the 5 years: 18±2%, 20±2%, 21±2%, 22±2%, 24±2%; data are consistent with a small upward trend.** Consultation with 1st year female students shows they value the gender balance at Open and Applicant Visit Days “[I] have been surprised by the number of girls in physics being higher than they expected it to be. I think this made a lot of the girls visiting feel more comfortable with the idea of studying physics”. The RG average for female intake is 23%, and 21% for the RS in 2016/17. With a 28%F intake in 2017/18, our female number will increase further.

Table 3: UG student Applications (App), Accepts(Acc), Offers (Off) by gender

Year	Female					Male				
	Acc	Off	App	Acc/Off	Off/App	Acc	Off	App	Acc/Off	Off/App
2013/14	58	176	240	33±3%	73±3%	222	582	915	38±3%	64±3%
2014/15	66	190	286	35±3%	66±3%	207	538	879	38±3%	61±3%
2015/16	64	209	269	31±3%	78±3%	186	590	783	32±3%	75±3%
2016/17	62	193	219	32±3%	88±3%	206	673	746	31±3%	90±3%
2017/18	72	245	275	29±3%	89±3%	195	605	716	32±3%	84±3%

Following removal of the government’s cap on undergraduate numbers, the standard admissions offer was changed from AAA to AAA*, for entry from 2014/2015. This has affected the self-selection of students. For prospective female students, a decrease in applicants with lower predicted grades has been compensated by an increase in applicants with higher predicted grades (App constant within statistical fluctuations). This compensation didn’t happen for males (App decreased each year, overall decrease of 22%). For both genders, the net effect has been applicants of higher quality, reflected in the increase in Off/App. Increasing numbers of applicants whose first choice is Oxbridge are selecting Birmingham as an alternative. Many of these high-calibre applicants are achieving their first choice, resulting in a small decrease in Acc/Off, with no significant female-male difference.

The ratio of Accepts for F/F+M over the 5 years is: 21±2%, 24±3%, 26±3%, 23±3%, 27±3%: an increase in three of the past four years, with an overall increase from 2013/14 to 2017/18 of 29%. This points to success of the strategy of actively highlighting to potential female applicants the achievements of female students,

graduates and staff, and links to the positive experience of female undergraduates, who report back to their schools and younger friends.

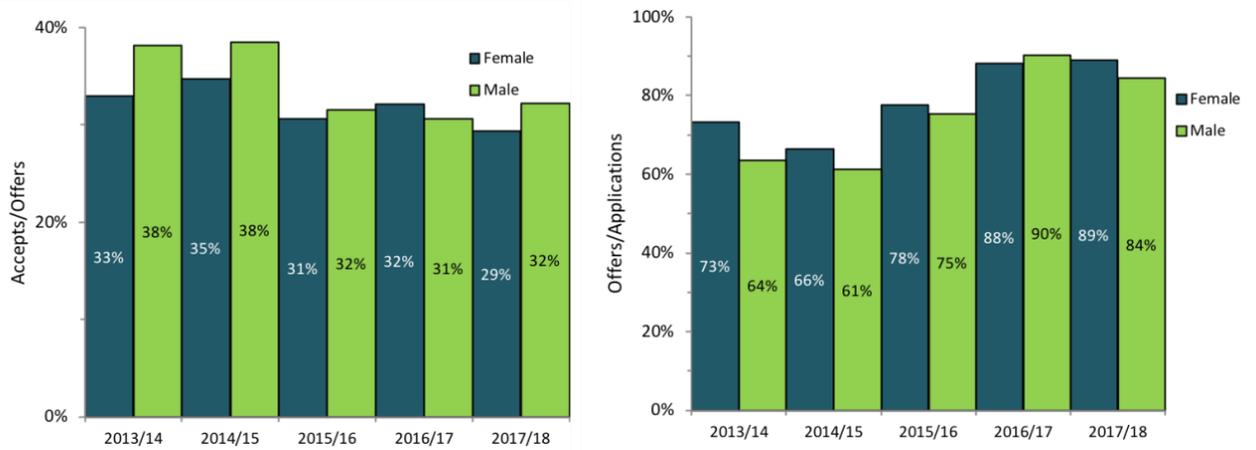


Figure 3. UG student Accepts/Offers and Offers/Applications by gender.

Table 4: UG student degree classification by gender.

First						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	12	38	24.0%	76.0%	67±11%	41±5%
2013/14	10	49	16.9%	83.1%	39±9%	54±5%
2014/15	13	69	15.9%	84.1%	46±9%	57±5%
2015/16	14	65	17.7%	82.3%	64±9%	60±5%
2016/17	15	63	19.2%	80.8%	40±8%	53±5%
2.1						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	5	31	13.9%	86.1%	28±10%	33±5%
2013/14	8	25	24.2%	75.8%	31±9%	28±5%
2014/15	9	31	22.5%	77.5%	32±9%	26±4%
2015/16	6	30	16.7%	83.3%	27±9%	28±4%
2016/17	15	37	28.8%	71.2%	40±8%	31±4%
2.2						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	1	19	5.0%	95.0%	5±5%	20±4%
2013/14	7	12	36.8%	63.2%	23±8%	13±4%
2014/15	6	14	30.0%	70.0%	21±8%	12±3%
2015/16	2	10	16.7%	83.3%	9±19%	9±3%
2016/17	6	16	27.3%	72.7%	16±6%	13±3%
Third/pass						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	0	5	0.0%	100.0%	0%	5±2%
2013/14	1	4	20.0%	80.0%	4±4%	4±2%
2014/15	0	6	0.0%	100.0%	0%	5±2%
2015/16	0	3	0.0%	100.0%	0%	3±2%
2016/17	2	3	40.0%	60.0%	5±4%	3±2%

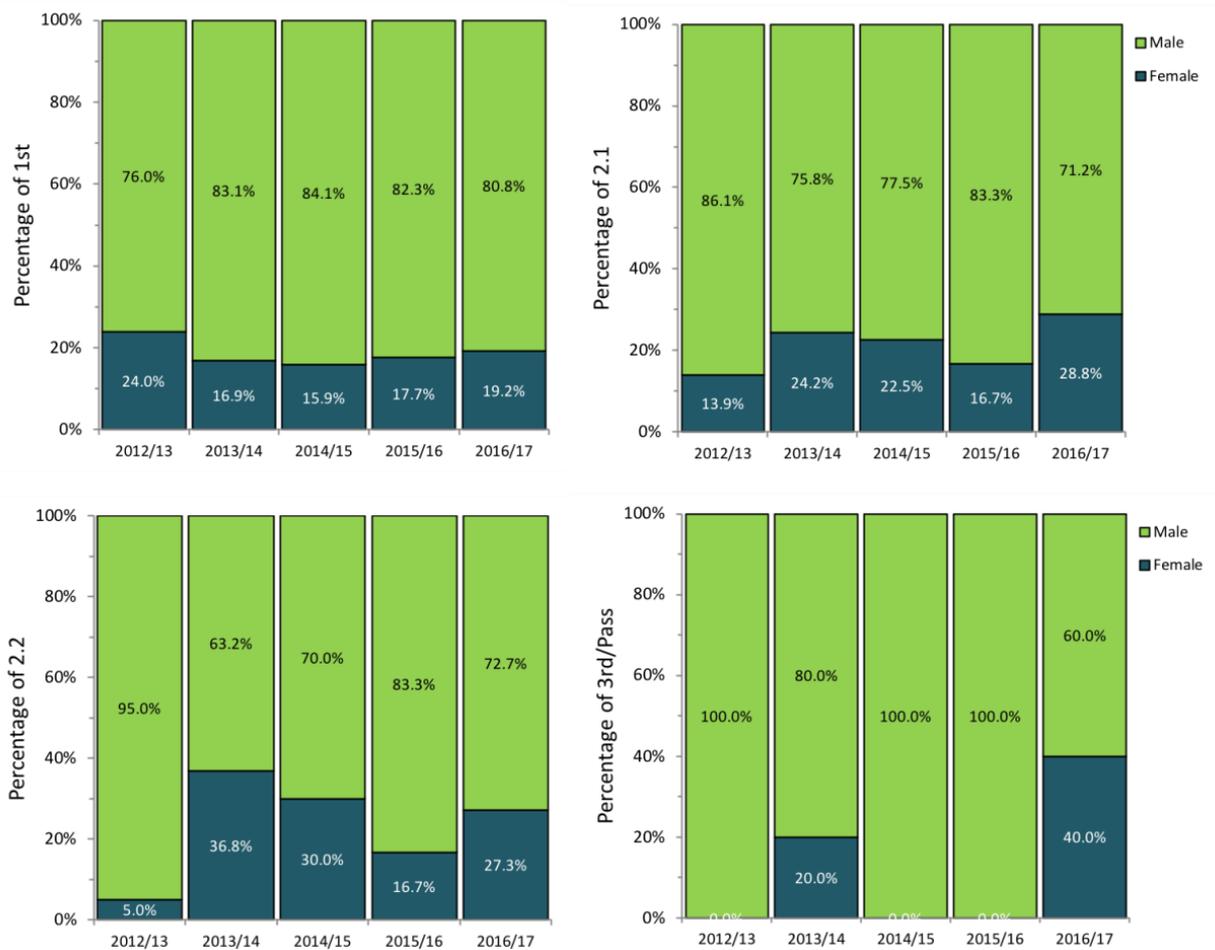


Figure 4. UG student degree classification by gender.

The female percentage for the classifications (1st, 2:1, 2:2 and 3rd) are (18±2%, 22±3%, 24±4%, 13±7%), Table/Figure 4. This compares well with the RG (21%, 22%, 22%, 18%) and the RS (22%, 21%, 19%, 25%). **The School recently changed the rubric of exam papers, reducing the degree of optionality (in 2016/17 for Y3&Y4).** This addressed concerns of the external examiners regarding grade inflation. A similar change has been made in 2017/18 for Y2 examinations. There are large fluctuations within years, independently of this change, in the F/All F fractions for the various grades; **the School is in the process of examining in detail the possible gender-specific impact by monitoring closely student performances.**

[443 words]

ACTION : Review the female exam performance as a result of the exam structure change (A3).

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

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

Table 5: PGT student intake by gender.

Year	Female	Male	Female	Male
2012/13	15	42	26.3%	73.7%
2013/14	6	52	10.3%	89.7%
2014/15	6	24	20.0%	80.0%
2015/16	10	36	21.7%	78.3%
2016/17	11	30	26.8%	73.2%

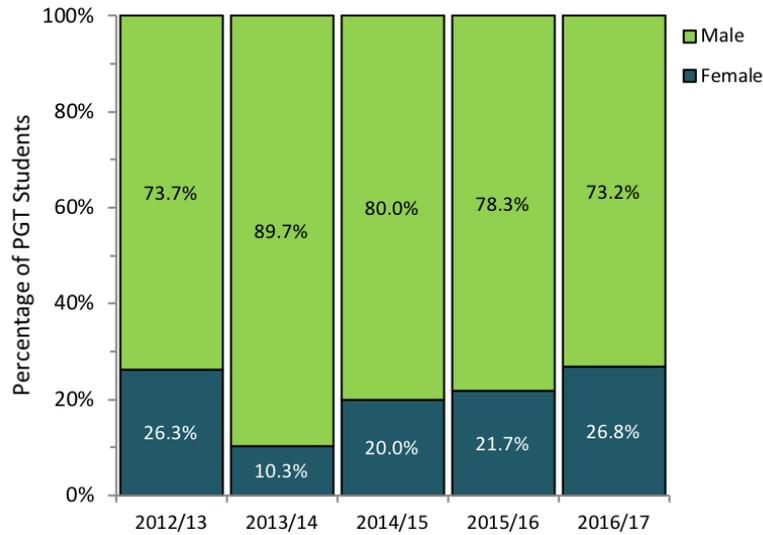


Figure 5. PGT student intake by gender.

Table 6: PGT student Applications (App), Offers (Off), Accepts (Acc) by gender.

Year	Female					Male				
	Acc	Off	App	Acc/Off	Off/App	Acc	Off	App	Acc/Off	Off/App
2013/14	6	21	24	29%	88%	50	84	106	60%	79%
2014/15	11	28	31	39%	90%	34	84	105	40%	80%
2015/16	11	27	30	41%	90%	38	88	105	43%	84%
2016/17	15	24	29	63%	83%	37	64	92	58%	70%
2017/18	8	17	19	47%	89%	36	74	97	49%	76%

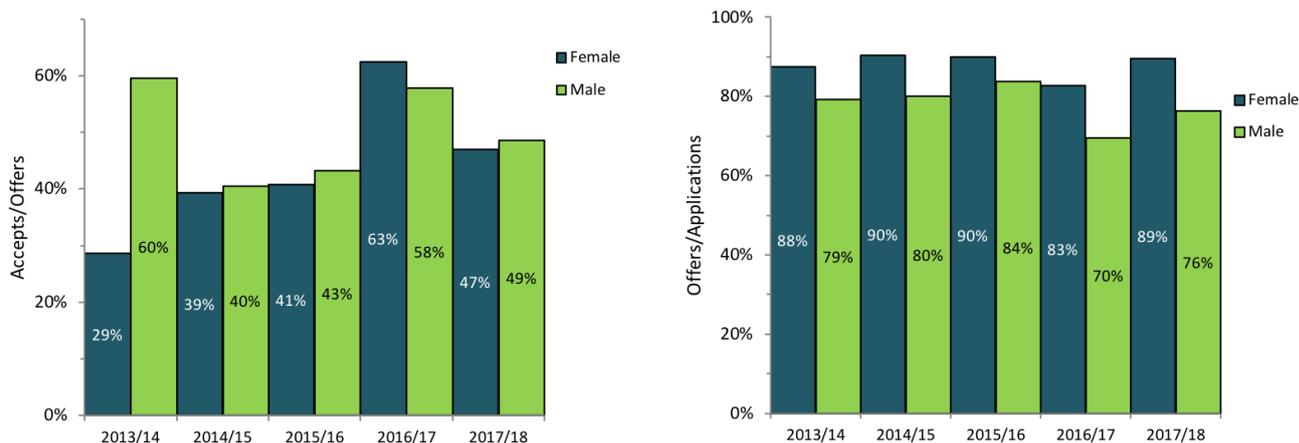


Figure 6. PGT students applications/offers/accepts by gender.

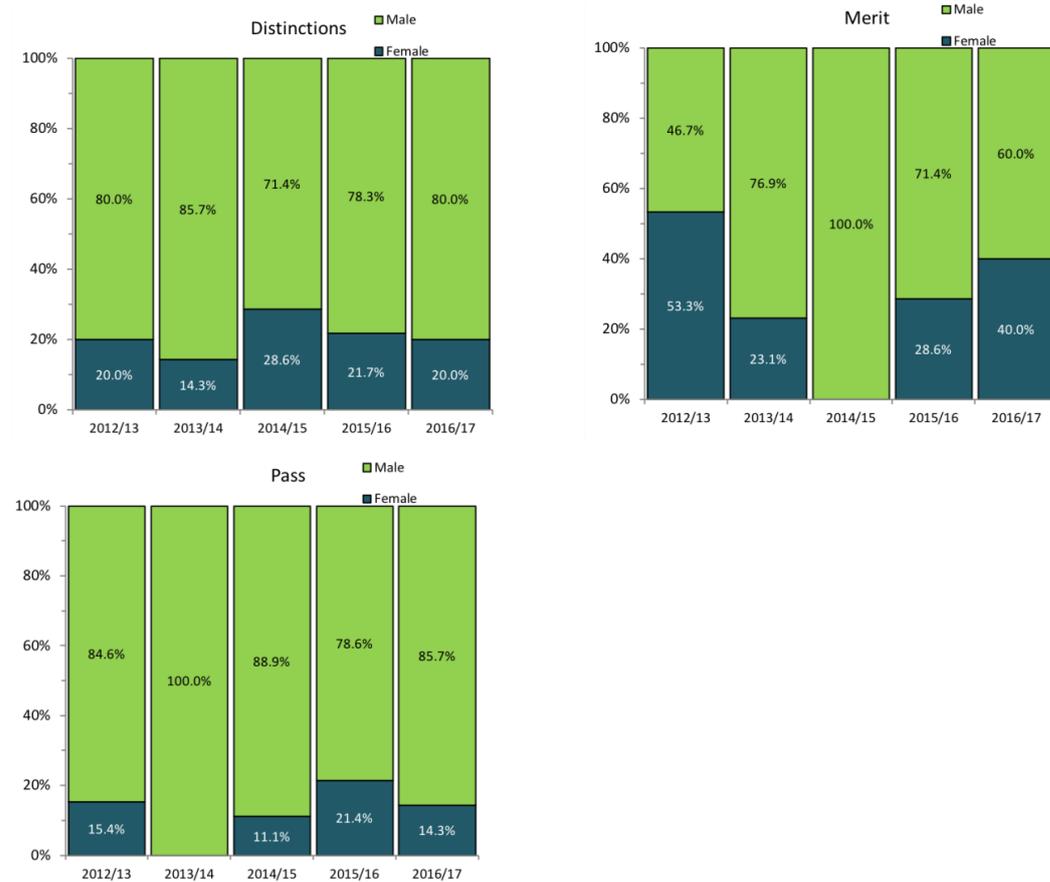
There are two PGT degree programmes: the PTNR and NDAWM, run for 5 years by Dr Kokalova. Both include placements in industry, and 100% of the students finishing the course have a job or a PhD offer. **The average female fraction for the 5 years is 21±3%, similar to the UG degrees (Table/Figure 5).** Although there are many overseas applicants, the intake is dominated by UK students (both F and M). In 2016/17 there were 41 students with just over 25% being female; the highest ratio over the 5 years period. The increase of females is the result of ED initiatives promoted by Dr Kokalova. The gender balance in the industrial lecturers (3M, 2F) reflects the gender balance in the nuclear industry sector and availability of female role models.

The percentage of offers is typically higher for female applicants by 5-10%, with no gender difference in the acceptance to offer percentages (Table/Figure 6). The promotion by the School of nuclear issues and actively recruiting talented female students has played a role.

Table 7: PGT student degree classification by gender.

Distinction						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	3	12	20.0%	80.0%	23±12%	40±9%
2013/14	4	24	14.3%	85.7%	57±19%	53±7%
2014/15	4	10	28.6%	71.4%	80±18%	42±10%
2015/16	5	18	21.7%	78.3%	50±16%	53±9%
2016/17	4	16	20.0%	80.0%	44±16%	57±9%
Merit						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	8	7	53.3%	46.7%	61±13%	23±8%
2013/14	3	10	23.1%	76.9%	43±19%	22±6%
2014/15	0	6	0.0%	100.0%	0%	25±9%
2015/16	2	5	28.6%	71.4%	20±13%	15±6%
2016/17	4	6	40.0%	60.0%	44±16%	21±7%
Pass						
Year	Female	Male	Female	Male	F/All F	M/All M
2012/13	2	11	15.4%	84.6%	15±10%	37±9%
2013/14	0	11	0.0%	100.0%	0%	24±6%
2014/15	1	8	11.1%	88.9%	20±18%	33±9%
2015/16	3	11	21.4%	78.6%	30±15%	32±8%
2016/17	1	6	14.3%	85.7%	11±10%	21±7%

Figure 7. PGT student degree classifications by gender.



Over the 5 years, there have been 9 drop-outs, 1F; **the average percentage of students achieving (distinction, merit, pass) are (20±4%, 33±7%, 13±5%)F and (80±4%, 66±7%, 87±5%)M**, Table/Figure 7, to be compared with the overall 21±3%/79±3% ratio of F/M students entering.

[212 words]

(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.

Table 8: PGR student number by gender.

	Female	Male	Female	Male
2012/13	23	83	21.7%	78.3%
2013/14	20	90	18.2%	81.8%
2014/15	22	104	17.5%	82.5%
2015/16	22	99	18.2%	81.8%
2016/17	19	98	16.2%	83.8%



Figure 8. PGR student number by gender.

Table/Figure 8 show the total PGR. **The average female percentage over the 5 years period is 18±2%, below the RG and RS average of 24-26%, and just below the UG percentage of 21±3%.** This is a concern for the School, and in 2017 a concerted effort was made to encourage female students to consider PhDs, e.g. via Y3 Pastoral meetings with tutors. The School has also developed activities to connect female UG students with female PhD students and staff. Female intake grew to 22% in 2017/18.

Table 9: PGR student applications (App), Offers (Off), Accepts (Acc) by gender.

	Female					Male				
	Acc	Off	App	Acc/Off	Off/App	Acc	Off	App	Acc/Off	Off/App
2013/14	4	8	29	50%	28%	29	42	137	69%	31%
2014/15	9	12	40	75%	30%	29	38	122	76%	31%
2015/16	2	4	34	50%	12%	24	32	121	75%	26%
2016/17	6	10	33	60%	30%	29	43	145	67%	30%
2017/18	12	20	45	60%	44%	42	49	136	86%	36%

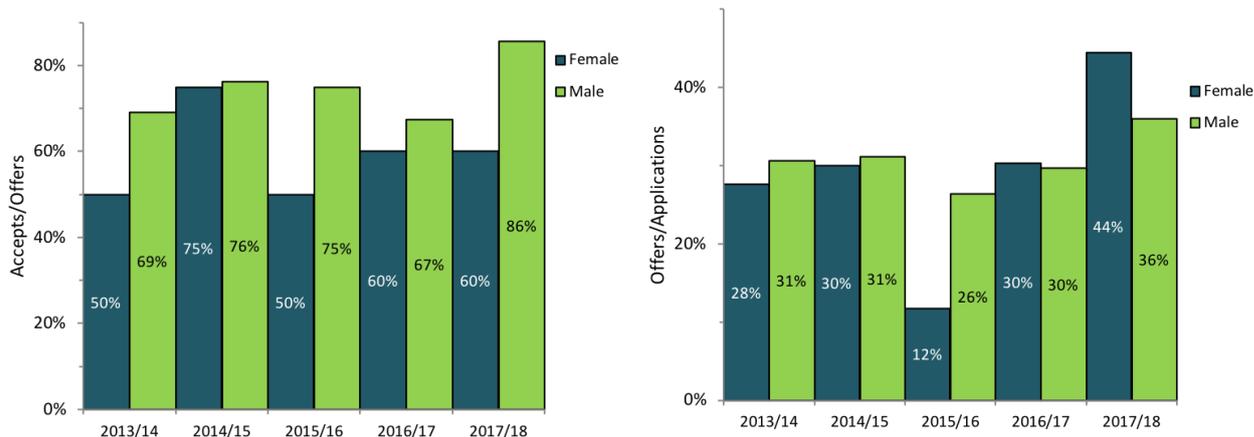


Figure 9. PGR offers and acceptances by gender.

Table/Figure 9 indicates is no trend in the PGR recruitment process. Over the last 5 years, 21.5% of applications are from female students of which 29.8% received offers. **However, the accept rates are different: 61.1% for females and 75% for male.** Although the drive for more female students to apply in 2017 was successful, the School needs to demonstrate the value of a PhD compared to a career outside academia. The successful School careers programme, popular with female students, has emphasised non-academic careers and second year students note the PhD versus non-academic message needs rebalancing.

ACTION: information campaign about research careers and PhD opportunities (A4.1).

Reflections from internal female applicants suggests that the project proposal requirement in the application is of particular concern.

ACTION : Improve advertisement procedure for PGR applications (A4.2).

Table 10: PGR student completion by gender (based on year of starting study).

	Female	Male	Female	Male	Leavers F	Leavers M
2008/09	5	22	18.5%	81.5%	2	4
2009/10	7	11	38.9%	61.1%	0	3
2010/11	8	13	38.1%	61.9%	0	2
2011/12	3	23	11.5%	88.5%	0	0
2012/13	4	21	16.0%	84.0%	0	4



Figure 10. PGR completions by gender (based on the year of starting study).

Over the period, there were 15 non-completions (2F) and 117 completions (27F), corresponding to 23% of the completions by female students which is greater than the 18%F enrolment; the completion percentage is 93% and 85% for female and male students, respectively. The School has implemented a number of changes to PhD supervision and monitoring. This includes second supervisors and a monthly completion of a progress review with student and supervisor. This actively supports the female students, particularly during mid-PhD when final results are still ambiguous, as indicated by reflections of current female students.

[292 words]

(v) Progression pipeline between undergraduate and postgraduate student levels

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

The PGR gender balance (18±2%F) is slightly worse than for the UG programme (21±1%F) but is consistent for the PGT programme (21±3%F). An emphasis on career development in the embedded skills programme, along with strong business and industry engagement, has successfully increased the Schools employability but requires a rebalanced message about PG opportunities. The School supports annual student society internship events, where students describe research opportunities.

[66 words]

[section 4.1 = 1114 words]

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.

SILVER APPLICATIONS ONLY

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

Table 11: Academic staff by grade and gender.

		Female	Male	Female	Male
RF(6,7)	12	10	31	24.4%	75.6%
	13	16	42	27.6%	72.4%
	14	11	37	22.9%	77.1%
	15	10	33	23.3%	76.7%
	16	9	39	18.8%	81.3%
RF(8)	12	2	9	18.2%	81.8%
	13	1	7	12.5%	87.5%
	14	1	13	7.1%	92.9%
	15	1	12	7.7%	92.3%
	16	3	15	16.7%	83.3%
SRF(9)	12	0	2	0.0%	100.0%
	13	0	2	0.0%	100.0%
	14	0	3	0.0%	100.0%
	15	0	3	0.0%	100.0%
	16	0	4	0.0%	100.0%
L(8)	12	1	14	6.7%	93.3%
	13	1	12	7.7%	92.3%
	14	2	10	16.7%	83.3%
	15	3	13	18.8%	81.3%
	16	3	15	16.7%	83.3%
SL(9)	12	1	11	8.3%	91.7%
	13	1	12	7.7%	92.3%
	14	1	15	6.3%	93.8%
	15	0	13	0.0%	100.0%
	16	1	13	7.1%	92.9%
Reader	12	2	4	33.3%	66.7%
	13	3	5	37.5%	62.5%
	14	2	4	33.3%	66.7%
	15	2	7	22.2%	77.8%
	16	2	9	18.2%	81.8%
Professor	12	1	18	5.3%	94.7%
	13	0	17	0.0%	100.0%
	14	2	16	11.1%	88.9%
	15	3	17	15.0%	85.0%
	16	3	18	14.3%	85.7%

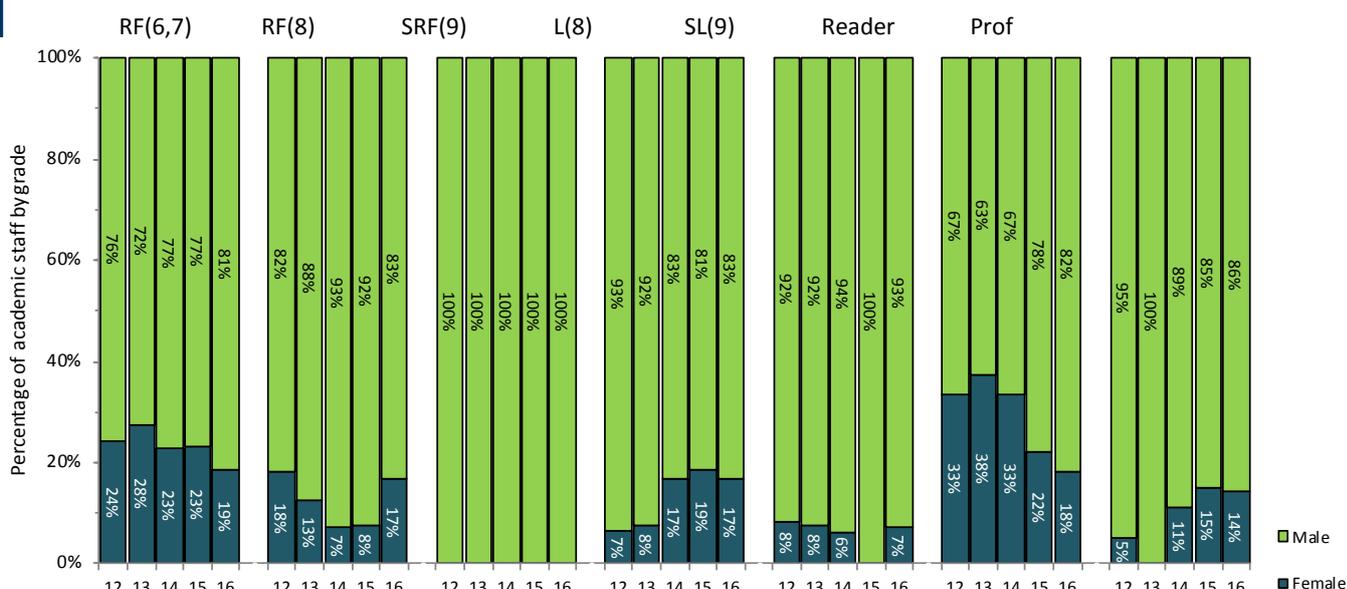


Figure 11. Academic and research staff by gender.

The School has 12 female academic/academic related staff: 4 Professors, 1 Reader, 1 SL, 3 Lecturers, 2 Birmingham Fellows and 1 academic related. There has been a marked development in female academic careers and a strong injection of talented new staff, particularly via the Birmingham Fellowships scheme. Three new female appointments were made in the last 2 years (3F/5M); two academic positions were just offered to females (and 2M). To compare, the RS number is 18%F for all academic staff. **The School strives to further improve gender balance, targeting 30% by 2023.**

ACTION: Increase the number of female academics; inspirational target of 30%F by 2023 (A5).

The female percentages of RF (Band 6 and 7), RF (Band 8) and SRF (9) are 22±5%, 14±6% and 0% (average of 2013, 2015 and 2017). **The gender balance of all Research Fellows is similar to the UG and PG population.** Following a JUNO action plan, the number of RF promotions from Band 6/7 to Band 8 has been investigated via an RF focus group. Findings indicate a potential lack of awareness about promotion opportunities for postdocs.

ACTION: Information campaign on promotion possibilities for RFs via the Performance and Development Plan (A6).

The School strategically used the transition from technical to academic role to ensure a sustainable future for the Outreach/Public Engagement/Liaison Officer (PE officer), previously a temporary contract. Recently, the PE officer (academic-related Pavlidou) began teaching the foundation programme and will teach a third year undergraduate module, allowing the conversion into an open contract.

[222 words]

(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.

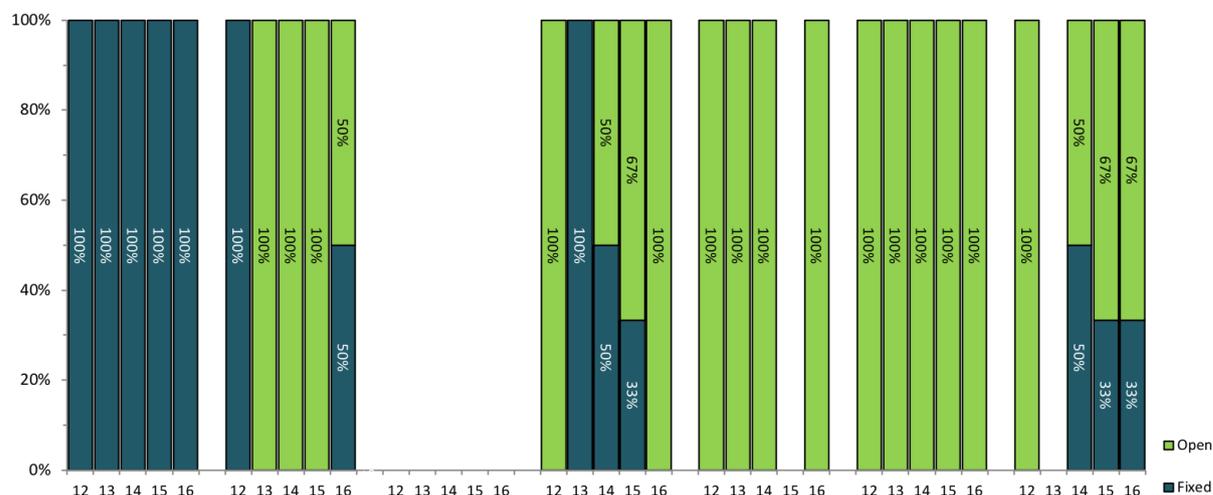


Figure 12. Academic and research staff by fixed-term/open contract and gender.

The pattern of fixed-term and open contract employees in the School, Table/Figure 12, is broadly the same for male and female staff. The only fixed-term academic female is a Professor, due to a personal request for partial retirement. The open contracts for RF and SRF are contingent upon funding. For staff near the end of contract, particularly those on research grants, there is a consultation and redeployment process which prioritises access to University jobs for qualified individuals. The School has reduced the number of fixed-term contracts, e.g. converting Pavlidou (section 4.2) and ex-Daphne Jackson Fellow Kokalova to open contract.

[99 words]

Table 12: Academic staff by type of contract and gender.

Female					
	Year	Fixed	Open	Fixed	Open
RF(6,7)	12	10	0	100.0%	0.0%
	13	16	0	100.0%	0.0%
	14	11	0	100.0%	0.0%
	15	10	0	100.0%	0.0%
	16	9	0	100.0%	0.0%
RF(8)	12	2	0	100.0%	0.0%
	13	0	1	0.0%	100.0%
	14	0	1	0.0%	100.0%
	15	0	2	0.0%	100.0%
	16	1	1	50.0%	50.0%
SRF(9)	12	0	0		
	13	0	0		

	14	0	0		
	15	0	0		
	16	0	0		
L(8)	12	0	1	0.0%	100.0%
	13	1	0	100.0%	0.0%
	14	1	1	50.0%	50.0%
	15	1	2	33.3%	66.7%
	16	0	3	0.0%	100.0%
SL(9)	12	0	1	0.0%	100.0%
	13	0	1	0.0%	100.0%
	14	0	1	0.0%	100.0%
	15	0	0		
	16	0	1	0.0%	100.0%
Reader	12	0	2	0.0%	100.0%
	13	0	3	0.0%	100.0%
	14	0	2	0.0%	100.0%
	15	0	2	0.0%	100.0%
	16	0	2	0.0%	100.0%
Professor	12	0	1	0.0%	100.0%
	13	0	0		
	14	1	1	50.0%	50.0%
	15	1	2	33.3%	66.7%
	16	1	2	33.3%	66.7%
Male					
	Year	Fixed	Open	Fixed	Open
RF(6,7)	12	26	5	83.9%	16.1%
	13	38	4	90.5%	9.5%
	14	35	2	94.6%	5.4%
	15	32	1	97.0%	3.0%
	16	37	2	94.9%	5.1%
RF(8)	12	3	6	33.3%	66.7%
	13	1	6	14.3%	85.7%
	14	6	7	46.2%	53.8%
	15	5	7	41.7%	58.3%
	16	7	8	46.7%	53.3%
SRF(9)	12	0	2	0.0%	100.0%
	13	0	2	0.0%	100.0%
	14	1	2	33.3%	66.7%
	15	1	2	33.3%	66.7%
	16	2	2	50.0%	50.0%
L(8)	12	1	13	7.1%	92.9%
	13	1	11	8.3%	91.7%
	14	0	10	0.0%	100.0%
	15	0	13	0.0%	100.0%
	16	1	14	6.7%	93.3%
SL(9)	12	0	11	0.0%	100.0%
	13	0	12	0.0%	100.0%
	14	0	15	0.0%	100.0%
	15	0	13	0.0%	100.0%
	16	1	12	7.7%	92.3%
Reader	12	0	4	0.0%	100.0%
	13	0	5	0.0%	100.0%
	14	0	4	0.0%	100.0%
	15	0	7	0.0%	100.0%
	16	0	9	0.0%	100.0%
Professor	12	1	17	5.6%	94.4%

13	1	16	5.9%	94.1%
14	0	16	0.0%	100.0%
15	0	17	0.0%	100.0%
16	1	17	5.6%	94.4%

(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.

Table 13: Leavers by grade and gender.

	FT – by Grade							PT - by Grade					
	Year	Female		Male		Percent Leave		Female		Male		Percent Leave	
		No.	Leav	No.	Leav	Female	Male	No.	Leav	No.	Leav	Female	Male
RF(6,7)	13	9	1	29	5	11.1%	17.2%	1	0	2	0	0.0%	0.0%
	14	15	0	40	1	0.0%	2.5%	1	0	2	0	0.0%	0.0%
	15	11	2	36	7	18.2%	19.4%	0	1	1	0		0.0%
	16	8	4	32	2	50.0%	6.3%	2	0	1	1	0.0%	100.0%
	17	6	0	38	7	0.0%	18.4%	3	0	1	0	0.0%	0.0%
RF(8)	13	1	0	8	0	0.0%	0.0%	1	1	1	0	100.0%	0.0%
	14	0	0	7	1		14.3%	1	0	0	1	0.0%	
	15	0	0	11	0		0.0%	1	0	2	0	0.0%	0.0%
	16	0	0	10	0		0.0%	1	0	2	0	0.0%	0.0%
	17	2	0	13	0	0.0%	0.0%	1	0	2	0	0.0%	0.0%
SRF(9)	13	0	0	2	0		0.0%	0	0	0	0		
	14	0	0	2	0		0.0%	0	0	0	0		
	15	0	0	2	0		0.0%	0	0	1	0		0.0%
	16	0	0	2	0		0.0%	0	0	1	0		0.0%
	17	0	0	3	0		0.0%	0	0	1	0		0.0%
L(8)	13	1	0	14	0	0.0%	0.0%	0	0	0	0		
	14	1	0	12	0	0.0%	0.0%	0	0	0	0		
	15	2	0	10	1	0.0%	10.0%	0	0	0	0		
	16	3	0	13	0	0.0%	0.0%	0	0	0	0		
	17	3	0	15	1	0.0%	6.7%	0	0	0	0		
SL(9)	13	1	0	11	0	0.0%	0.0%	0	0	0	0		
	14	1	0	12	0	0.0%	0.0%	0	0	0	0		
	15	1	0	15	0	0.0%	0.0%	0	0	0	0		
	16	0	0	12	0		0.0%	0	0	1	0		0.0%
	17	1	0	11	0	0.0%	0.0%	0	0	2	0		0.0%
Reader	13	2	0	3	0	0.0%	0.0%	0	0	1	0		0.0%
	14	3	0	5	0	0.0%	0.0%	0	0	0	0		
	15	2	0	4	0	0.0%	0.0%	0	0	0	0		
	16	2	0	6	0	0.0%	0.0%	0	0	1	0		0.0%
	17	2	0	7	1	0.0%	14.3%	0	0	2	0		0.0%
Prof	13	1	0	16	0	0.0%	0.0%	0	0	2	0		0.0%
	14	0	0	15	0		0.0%	0	0	2	0		0.0%
	15	1	0	15	0	0.0%	0.0%	1	0	1	0	0.0%	0.0%

	16	2	0	16	0	0.0%	0.0%	1	0	1	0	0.0%	0.0%
	17	2	0	15	0	0.0%	0.0%	1	0	3	0	0.0%	0.0%
Total	13	15	1	83	5	6.7%	6.0%	2	1	6	0	50.0%	0.0%
	14	20	0	93	2	0.0%	2.2%	2	0	4	1	0.0%	25.0%
	15	17	2	93	8	11.8%	8.6%	2	1	5	0	50.0%	0.0%
	16	15	4	91	2	26.7%	2.2%	4	0	7	1	0.0%	14.3%
	17	16	0	102	9	0.0%	8.8%	5	0	11	0	0.0%	0.0%
Av		83	7	462	26	8.4%	5.6%	15	2	33	2	13.3%	6.1%

The staff turnover for the School is low. The full time staff turnover is 8.3%M and 8%F (averaged). **The vast majority of full time leavers are RF (6,7), corresponding to contraction termination** due to fixed term funds ending or the opportunity for a career change/advance (86%M and 100%F, as fraction of total leavers). **For part time staff the fractions are 50%M and 50%F**, and are particularly low (1 person in both 2013 and 2015). Although some information about leavers' destinations is kept, these records are incomplete.

[86 words]

ACTION : Use a short voluntary questionnaire for leavers and an exit interview, to consistently and fully record the next destination and main reason for leaving (A7).

[section 4.2 = 407 words]

[section 4 = 1876 words total]

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

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

5.1. Key career transition points: academic staff

(i) Recruitment

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.

Table 14: Recruitment between 2013 and 2017

Year	Applications			Shortlisted			Appointed		
	Female	Male	% Female	Female	Male	% Female	Female	Male	% Female
2013	29	107	21.3%	9	32	22.0%	5	22	18.5%
2014	39	190	17.0%	12	30	28.6%	9	19	32.1%
2015	64	226	22.1%	16	44	26.7%	9	27	25.0%
2016	37	164	18.4%	3	25	10.7%	3	18	14.3%
2017	37	156	19.2%	8	56	12.5%	3	36	7.7%

Year	Applications					Shortlisted					Appointed					
	13	14	15	16	17	13	14	15	16	17	13	14	15	16	17	
RF(6,7)	F	29	25	36	29	17	9	10	7	2	2	5	7	7	2	0
	M	104	119	149	127	101	29	23	26	23	43	19	14	21	17	26
	%F	22	17	19	19	14	24	30	21	8	4	21	33	25	10	0
RF(8)	F	0	0	1	6	15	0	0	0	0	4	0	0	0	0	2
	M	2	1	5	33	31	2	1	3	0	4	2	1	3	0	3
	%F	0	0	17	15	33	0	0	0	0	100	0	0	0	0	40
SRF(9)	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	M	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0
	%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L(8)	F	0	13	14	2	5	0	1	6	1	2	0	1	1	1	1
	M	1	69	40	4	22	1	5	5	2	8	1	3	2	1	6
	%F	0	16	26	33	19	0	17	55	33	20	0	25	33	50	14
SL(9)	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reader	F	0	0	13	0	0	0	0	3	0	0	0	0	1	0	0
	M	0	0	31	0	0	0	0	9	0	0	0	0	0	0	0
	%F	0	0	30	0	0	0	0	25	0	0	0	0	100	0	0
Prof	F	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0
	M	0	1	0	0	2	0	1	0	0	1	0	1	0	0	1
	%F	0	50	0	0	0	0	50	0	0	0	0	50	0	0	0

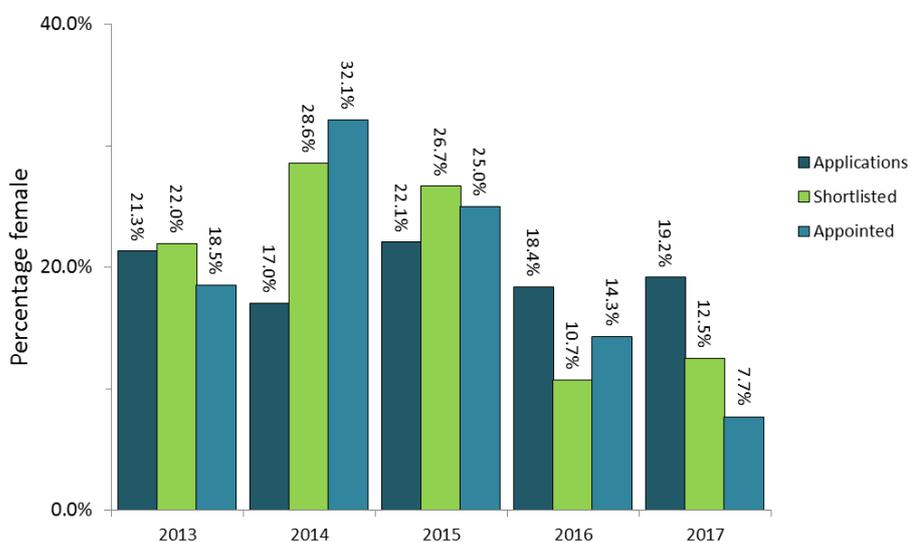


Figure 14. Applications, shortlisted and appointments between 2013 and 2017.

Averaged over the 5 years, the percentages of females at each stage (Applications, Shortlisted, Appointed) were: 19.6%, 20.4% and 19.2%, Table/Figure 14. During 2017, the School appointed 5 Birmingham Fellows, 2F. Of the 11 female academic staff, 3 new appointments have been made in the last 2 years (3F/6M).

“I was attracted to join the University of Birmingham because of its academic reputation and... friendly and positive environment within the School”. **Hannah Price, Birmingham Fellow**

The School as a whole follows specific policies stemming from previous JUNO actions:

- Female members on all appointment panels, including a member from outside the School;
- Panel members must have taken the University Unconscious Bias training;
- Promote and spread best practice, e.g. search committees that actively engage with strong potential female applicants to encourage their application for open positions.

A consultation of recently appointed females confirms these policies are effective; however, they are not practiced uniformly across research groups. The female recruitment drop for RF(6,7) in 2016 and 2017 stems from a drop in shortlisting, when not all these policies were followed closely and uniformly across research groups. Additionally, the standard job advert does not highlight key benefits, like child care or flexible working. The job advert and recruitment process will be improved.

[208 words]

ACTION: improve recruitment process at all levels; inspirational target of 30%F by 2023 (A5).

(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.

Induction helps people feel welcome. **Resulting from a JUNO action**, an induction pack was created and is given to all new academics, with information on the School structure, processes and people; this handbook is also available on the School intranet. Health and Safety induction is mandatory, performed by the School's Technical Manager. All new academics to the School are encouraged become involved in committees to develop an understanding of the School operation and personnel. New staff receive a specific induction from their research group. Additionally, a University induction is held monthly, providing practical information and helping people understand their role in the wider organisational structure. Induction is perceived positively by new female staff. However, feedback from RAs suggests research group induction is sometimes patchy. A plan to deliver School tailored induction is being implemented. Since 2014, research groups provide informal help through a buddy system for new staff, and junior academics are assigned a mentor from another discipline (**result of JUNO action**).

Consulting new staff, the School atmosphere is perceived positively.

"Since arriving, my positive impressions of the School have only been strengthened; as well a supportive environment (including mentor and buddy scheme), I have been given many opportunities to develop my research activities, to access training and to give feedback on my experience". **Hannah Price, Birmingham Fellow**

Equality and Diversity training is part of induction for all staff; a record is kept of those who completed the training. This has been completed by 75%M/79%F (89M/22F)

research and academic staff, and 85%M/93%F (17M/13F) of technical and professional services staff. The School strives to ensure new staff, and those who have missed training, complete the programme. In a 2016 survey, only 6% of staff disagree with the statement that E&D is taken seriously by the University.

[295 words]

ACTION: Make RF induction uniform across research groups (A8).

ACTION: E&D training campaign; survey to gather opinions on E&D training (A1).

(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.

Table 15. Promotion applications in 2013 to 2017

	Year	Female			Male		
		App	Approv	Success	App	Approv	Success
SL(9)	13	0	0		0	0	
	14	1	1	100.0%	1	1	100.0%
	15	0	0		4	2	50.0%
	16	0	0		1	1	100.0%
	17	1	1	100.0%	1	1	100.0%
Reader	13	1	1	100.0%	1	0	0.0%
	14	1	1	100.0%	2	2	100.0%
	15	0	0		1	0	0.0%
	16	0	0		2	2	100.0%
	17	0	0		4	4	100.0%
Professor	13	0	0		4	3	75.0%
	14	1	1	100.0%	2	0	0.0%
	15	1	1	100.0%	0	0	
	16	1	1	100.0%	1	0	0.0%
	17	0	0		2	1	50.0%

The School's promotions are summarised in Table 15. Over 5 years, 27% of applications are from females (7 applications) with a 100% success rate. Of the 11 female academic staff, 6 applied for promotion (54.5%). Kokalova (ex-Daphne Jackson Fellow) was promoted to SL in 2017, Li was promoted to Reader in 2013, Lazzeroni to Professor in 2015, Wilkin to Professor in 2016, and Blackburn to Professor in 2018 (following maternity leave).

The University/College and School operate a supportive but rigorous promotion process, **improved by JUNO actions**, annually:

- Criteria are available online to all staff; focus groups indicate these are accessible and clear.

- The College offers promotion workshops which advise potential candidates on the process.
- **The Head of School and Heads of Research group proactively encourage staff to put forward applications (JUNO action).**
- The School asks for applications to be submitted which are reviewed by the School Promotions Panel, comprised of senior academics (male and female). In the last 5 years, 100% of female applications were approved.
- **For those qualified by the Panel, feedback and mentoring is given to produce the final application, which is submitted to the College (JUNO action).**
- Applications for Reader and Professor can result in an interview by the College Panel; **the School provides mock interviews (JUNO action).**

Though anecdotal, mentoring and mock interviews have proven very useful to female staff.

[224 words]

(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.

Table 16: REF 2014 submission data

REF2014	Female	Male	Female	Male
FTE All	5.6	44.3	11.2%	88.8%
FTE Sub	4.6	34.3	11.8%	88.2%
FTE Not Sub	1	10	9.1%	90.9%



Figure 15. REF2014 Submission data: all staff at the time of the REF and gender breakdown of staff who were submitted or not submitted to the REF2014.

Table 16/Figure 15 show the gender breakdown of REF2014: **4.6 female from 5.6 FTE (82%) were submitted (1 not submitted, teaching focussed), compared with 34.3 male from 44.3 FTE (77%) (10 not submitted)**. For part time female, the School successfully made the case for a reduced number of outputs to be considered. New female staff will feature strongly in the forthcoming REF.

[62 words]

[section 5.1 = 789 words]

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 non-academic staff at Birmingham are Professional Services (PS) staff. As part of the induction, all PS staff:

- are given an **induction pack**
- receive Health and Safety training
- are asked to complete the **online diversity training**

In addition, they tour the School with their line-manager and are introduced to key people. All new staff are introduced to the School by the HoS at the termly School meeting.

Professional Services staff in the School form part of the wider College Professional Services and are given the opportunity to attend College and University events to broaden their skills and networks. These events are well attended by staff (43%F), including a seminar/workshop series for all PS staff and the “Technically Speaking” forum targeted at Technicians.

[122 words]

(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.

Unlike academic roles, which have advancement opportunities, PS roles are limited by the change required for re-grading. For PS staff, promotions may occur from role changes, e.g. additional responsibilities. The more common route to promotion is to apply for higher grade positions within the University.

Future career plans are discussed during the staff PDR. The College encourages Professional Services staff to take fixed term secondments to broaden their experience, enhancing their knowledge and skills to better position them when applying for new roles. For technicians, the new Technical Academy is a dedicated platform for skill and career development.

As an example, the School UG Team Leader (M) was moved to the role of School Technical Manager as part of succession planning and career development. The Education Support Office Manager (F) is a secondee, while her Manager (F) is covering a College-wide quality assurance role for 12 months.

The 2 most recent female promotions in the School are the UG Technical Team Leader Grade 6 (Avril Rogers) and a secondment to Grade 6 (Kelly Chilton- Davies).

The University also annually runs BUAFTA awards to recognise outstanding members of the professional staff. A BUAFTA is a tremendous achievement and is helpful when applying for a new position. Recent winners include Kelly Chilton-Davies and Jennifer Clerici.

[213 words]

[section 5.2 = 335 words]

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 University People and Organisational Development (POD) team offers ~50 development training modules, covering budget planning to PDR training (section 5.3 (ii)) and unconscious bias.

The fraction of female staff attending training courses is typically high; the Unconscious Bias and PDR Training attendance is 43.5%F.

Courses also cover leadership skills: the SLP and the EPSRC Developing Leaders (ELP) programme for senior staff; 'Developing as a Research Team Leader' for early career researchers. The POD team notifies the HoS of attendance (20%F in the past 5 years from Physics).

From E&D culture and JUNO actions, staff gender is balanced for training when possible. **Recently, the School successfully**

nominated 13 people for the senior leadership programmes, 3F (23%), and 7 people for the junior programme, 1F (14%).



Penny Gowland, University of Nottingham: "In 2016 Nicola Wilkin noticed that female students were unwilling to take leadership roles in undergraduate project teams. She recognised... and devised a specific multi-institutional intervention aimed at addressing this problem."

E&D unconscious bias training: the School included E&D and unconscious bias training in the 2017 Induction Week programme for all new PG students in Physics. The School of Physics and Astronomy requested at College/University level to provide a yearly course, and was the first School to do so. The scheme will be extended to all Schools in EPS from 2018. The student survey revealed the training was *the* most successful and popular part of Induction Week.

Cultural Awareness training: the School initiated a new Cultural Awareness course, designed and led by Prof Wilkin. Tailored for overseas RF/PG staff, the course promotes awareness of new and different cultures, focusing on staff in contact with students via teaching. **The course is described as “an eye-opener” by attendees.**

Leadership Workshop Quotes from participants:

“Interesting day, was very useful to hear from successful female academics... Very inspiring to hear that having kids and part time work does not mean that you will not get anywhere in your career!!”

“I really enjoyed this workshop... The session was very informative and gave me lots to think about...”

Female Leadership Course: first held in collaboration with the University of Nottingham, this course **enhances female leadership skills** across the University’s Science and Engineering disciplines. The idea stemmed from observing female students were sometimes less confident in pushing for leadership in group-based activities. The 1-day long workshop is led and run by Averil Macdonald.

A mixture of 32 female Y3-Y4 UG and PG students, plus 3 post-doctoral researchers, participated in the course. Participants would recommend the course to colleagues (85%) and found the sessions stimulating and useful (78%).

[431 words]

(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.

The University has a formal annual Performance and Development Review (PDR) for academic and Professional Services staff (see Table 17). Guidance and paperwork are provided online, including training for PDR reviewers (PPDR reviewer briefing and bias busting). POD offers a range of training and awareness programmes associated with the PDR process (43.5%F attending) including: Introduction to PDRs for Reviewers and Setting Objectives and Performance Standards; PDR for reviewers of support staff; PDR for reviewees of Professional Services. Feedback is positive.

The School operates its own annual PDR for all staff. Each staff member completes a self-assessment in advance, serving as the basis for a discussion with their line manager in setting yearly objectives. **The discussion encourages, supports and explores career development opportunities and progression.** The Head of School performs senior staff PDRs, e.g. Professors and research group leaders, and new staff PDRs as part of

probation. Heads of Research Groups perform the PDRs for academic, research and technical staff within their groups.

All female staff have completed the PDR every year, Table 17. Since 2014, 15 (41) staff completed PDR reviewer (unconscious bias awareness) training.

	2015		2016		2017	
	F	M	F	M	F	M
Academic	100%	100%	100%	98%	100%	95%
Research and Technical Staff	100%	100%	100%	94%	100%	95%

Table 17. PDR completion rates for the last three years

The 2016 University-wide survey captured **staff opinions on professional. The School performance is similar to the EPS College.** The following statements had positive or neutral responses for the School (EPS): “I feel supported with my professional development”, 81% (72%); “I receive constructive feedback on my performances”, 76% (74%); it is a concern that 26% of staff disagree. These data are unavailable by gender. **The School has a target of 100% PDR completion by 2019 and will survey the effectiveness of the PDR and its related training, also by gender.**

[274 words]

ACTION: PDR effectiveness survey, data collected by gender; 100% PDR completion by 2019 (A9).

(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.

Career progression supported via the PDR, College promotion workshop mentoring and the School’s promotion process (see above).

For Lecturers, probation involves mutually agreed targets with the HoS, charting a course for promotion to SL within 3-years. Recently, all female staff have been promoted to SL by the end of probation (Kokalova), and progress by new female staff indicate this trend will continue.

Resulting from a JUNO action in 2014, new academics within the School are given a mentor during probation. The mentor is a senior academic from another discipline and provides support, advice and discussion on. Similarly, new RFs are offered a mentor. **Anecdotal evidence suggests this is particularly effective to female for discussing development and promotion.**

Through consultation of the RA Network and a focus group, the School recognises the need to improve RF awareness of training and career development opportunities. A promotion campaign and the addition of course completion certificates is planned.

[154 words]

ACTION: Promotion of opportunities of training courses for female RFs and development of completion certificates for training courses (A10)

(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).

For UG students a strong focus is on career development; the School has a dedicated Careers Officer (member of faculty and the University has a Careers Advisor Network (CAN). Both organise annual recruitment fairs within the School and provide personal advice and guidance on career opportunities. The School has a dedicated CAN space for students; in 2017 90% of the third-year students (175) had contact with the CAN (gender data unavailable). The skills programme and tutorial systems include CV and application letter writing sessions, application centre preparation and employer advice on applying. The Physics Society (PPS) runs a session where students with internships provide tips and advice for those interested in applying.

On average, 28% of internships students are female (i.e. above the percentage of female students).

The School is the top performing UK Physics department with a 2015/16 DLHE graduate employability statistic of 94.1%.

The graduate employability breakdown for 2011/12 - 2015/16 is:

F: 88.9%, 93.3%, 80.0%, 75.6%, 100%

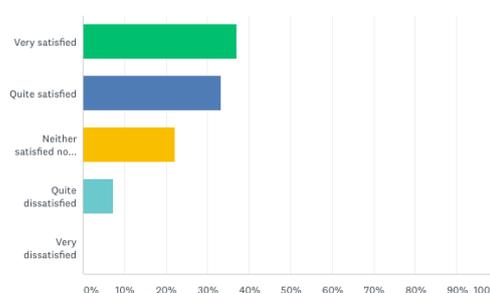
M: 83.4%, 89.3%, 91.7%, 86.9%, 93.2%

In 3 of the past 5 years, female graduates outperformed their male colleagues. It is noted that female students start job hunting earlier than males, as seen by UG pastoral tutors.

Each PhD student must annually perform a Development Needs Analysis (DNA) with their supervisor, focussing on skills the student wishes to obtain in the coming year and aiding professional and career development. Discussion covers available training, encouraging the student to recognise their own training needs and which courses to take (aside from the compulsory ones). The Careers Officer and Careers Network Advisor also provide advice to PhD students. The University Graduate School runs career related seminars/workshops, the Westmere Careers Series. Past topics include: "What Matters to Me: Positive non-academic career planning for PGRs", "Effective

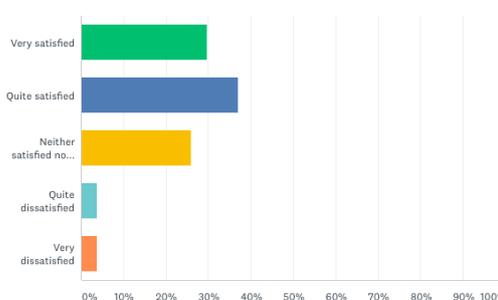
Are you gaining enough transferable skills from your PhD (e.g. team working skills, presentation skills, analytic skills, computing skills, teaching skills)?

Answered: 27 Skipped: 0



Are you satisfied with the general working environment and atmosphere in the school of physics?

Answered: 27 Skipped: 0



Example results from PG survey

Networking”, “Making the Most of your PhD”, “Introduction to enterprise and start-up for PGRs” and “Careers outside of academia”. **A recent survey of PhD students in the second largest research group indicates female PG students appreciate the Department environment, are satisfied with career advice and value the transferable skills they acquire (F/M opinions are aligned).**

[351 words]

ACTION: Improve awareness of PhD opportunities (A4.2)

(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.

A substantial fraction of the School’s grant applications are for STFC consolidated grants; this process is highly collegiate. The strong group identity in Astronomy, Helio/Astero-seismology, Nuclear and Particle Physics facilitates successful grant writing, together with the University finance and research support teams.

All staff are expected to apply for grants. For new staff, targets are established during where an annual meeting with the Head of School identifies additional support needs. Support includes mentoring and linking to support teams. The success of new female academics was demonstrated, as 4 of 5 recent female appointees were awarded or shortlisted for personal fellowships. Recently, the School ran a workshop, facilitated by the College Research Support team, to help new staff improve success rates and write grants. The EPS College also organises regular events, e.g. “Apply for fellowships” and “Apply for EU Grants”. The School now has 2 female academics with RS URFs and 1 female shortlisted for a national Innovation Fellowship.

For EU grant applicants, the University EU Research Office provides a reviewing and advice system, pairing researchers with a reviewer. The reviewer advises on specific EU schemes and regulations and comments on drafts, from conception to final proposal.

[259 words]

[section 5.3 = 1469 words]

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?

Staff have opportunities for job specific training beyond those provided by the University's POD. These are well attended, often to capacity. Feedback is taken per session to appropriate changes. **Over the past two years 44 members (43%F) of PS staff from the School have attended POD courses (PS staff are ~35%F).**

ACTION: Lobby University for increased POD courses provision, and create a booking-head system (A11).

Most training requirements are identified from PDRs. Staff are encouraged to check the Intranet for offered courses and participate in those which may improve skills or build confidence, thus helping staff to reach full potential. The University also provides special training opportunities for PS, such as the ILM courses which improve leadership skills, which is important for staff when applying for a higher-grade roles.

The School encourages apprenticeships and trainees. Currently, there is 1 female apprentice in the School UG Technical team on a two-year contract; the School Mechanical Workshop has apprenticed four trainees (1F) over the past five years through the Apprentice Scheme. The female head of teaching technical support has provided a role model and important support.

[170 words]

(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.

The PDR for PS is the same as in section 5.3 (ii) and is uniform across the University. The PDR allows reflection on the previous year, while setting new and discuss career aspirations. Reviewers must attend reviewer training, run by POD. Attendance is checked and is 100% for PS reviewers. **All PS staff have an annual review or PDR; attendance is 100%M/100%F.** In the 2016 University survey, 87% of PS staff thought the PDR process is useful (gender data unavailable).

[80 words]

ACTION: PDR effectiveness survey, data collected by gender (A9).

(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.

Support is given via PDR and training, as described above.

[10 words]

[section 5.4 = 260 words]

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.

The formal University policy on support for adoption and maternity leave is available online or via HR.

When staff prepare for maternity, paternity or adoption leave, **the School rearranges responsibilities for the period of leave in advance** (five cases in the last four years, one in preparation). This procedure is the same for other life events, including significant illness. Typically, **coverage arrangements** are performed with the HoS, Head of Education or the line manager and **use the University central fund system to pay for part time teaching cover.**

For staff going through the adoption process (one of the five cases), the School **facilitates the necessary absence needed for preparation** prior to the formal adoption period or period preceding maternity leave, when arrangements are made through flexible working. From parent focus groups, the schemes are well understood.

[198 words]

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

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

The University created a Parents and Carers intranet site, following requests for more accessible family-facing arrangements. The University redesigned maternity pay rules, ensuring staff with contract and funding end dates are not disadvantaged if these fall within their leave or 3 months of return. The University offers guidance for arranging pregnancy and maternity leave/pay via meetings with a full-time HR maternity adviser.

In addition to the statutory maternity/paternity/adoption pay, **the University operates a central fund for Schools to pay part time cover for teaching activities.**

The School guards and sustains research activity during leave: in two recent cases the School supported technical and research positions during the break with central funding, ensuring research continuity. The formal process seeks redeployment of funding through the College Post Approval Group, CPAG, and in both cases was led by the HoS. Unfortunately, one case of maternity leave occurred during PhD recruitment.

Elizabeth Blackburn & Francois

Congratulations to Elizabeth and Francois on the birth of their son James 3.2kg (7lb 1oz)



The School Bulletin

“I had a son in 2015. I took six months of maternity leave, before returning full-time... The flexibility permitted in working around teaching responsibilities has been very beneficial. The School provided bridging funds to support my research technician during my maternity leave. I have found the School to be a supportive environment while my son is small...” **Elizabeth Blackburn**

This failing was recognised by the Chair of the Graduate Studies Committee; as a consequence, **a system now allows for PhD studentships to start through the year to match return dates.**

The School developed a **series of lunchtime social meetings for staff associated with maternity breaks, to create a small community of academics** across the College in a similar situation. Members have exchanged information on resources outside the university and valuable personal experience. This also involved the wife of the HoS, who had the experience of raising nine children. The School celebrates moments such as births through the weekly bulletin and sending congratulatory flowers to the parents.

[254 words]

(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 University provides a supportive environment for those returning with the "Flexibility and Family-Friendly Working" scheme. The University has two day-nurseries, the Oaks and Elms (320 places), open to staff and students of the University. The University also offers childcare voucher and the Buying Additional Leave schemes. The latter was introduced to support work-life balance; staff may exchange a portion of their salary for up to 10 days of additional annual leave.

The School prioritises academics returning from career breaks via investment in equipment and personnel to develop new research initiatives (over £400k of equipment funding was contributed over the last 3 years to female returners). Funding is through the College as described in section 5.5 (ii).

The School also takes advantage of the "EPSRC Developing Leaders: Widening the Pool of Research Experience" (EDL) scheme. This scheme supports academics returning to work following a career break and assists in re-establishing the applicant's research profile. Prof Blackburn (a maternity returner in the School) utilised this scheme.

The School also supported 2 returning female academics, following extended periods of raising families, through the Dorothy Hodgkin and Daphne Jackson Fellowships and initial fixed term lectureships, which for one staff has already led to an open contract.

The School supports requests for rescheduling teaching around child or other care responsibilities. All accessible toilet facilities have baby changing tables and nappy bins (pioneered by the School in the EPS College).

[301 words]

"This EDL funding has definitely been beneficial. I was able to recruit two high quality MSci... allowing me to pursue research avenues that would not otherwise have been possible. I have also been able to dedicate some technician time to specific tasks... This funding came at exactly the right moment and... has helped tremendously in picking up my research work after my maternity leave." **Elizabeth Blackburn**

(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.

In the last 5 years the School retained 100% of staff returning from maternity leave, and has even re-established one member of staff who left a previous organisation when taking maternity leave.

[32 words]

Year	Type of Leave	Start of Leave	Date of Return	Still Employed Following Return Date?		
				6 Months	12 Months	18 Months
2017	No leave for this period	N/A	N/A	N/A	N/A	N/A
2016	Paternity Leave (PS)	10/02/2016	27/02/2016	Yes	Yes	N/A
2016	Paternity Leave (PS)	04/03/2016	11/03/2016	Yes	Yes	N/A
2016	Paternity Leave (Ac)	03/10/2016	17/12/2016	Yes	Yes	N/A
2015	Maternity Leave (Ac)	21/09/2015	04/04/2016	Yes	Yes	Yes
2014	No leave for this period	N/A	N/A	N/A	N/A	N/A
2013	No leave for this period	N/A	N/A	N/A	N/A	N/A

Table 18. Maternity and paternity returns since 2013 for Academic (Ac) for Professional Service (PS) staff

(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.

There has only been one case of academic paternity leave, reflecting a national trend of under-utilised paternity leave. Instead, some male academics have used the School's flexible work approach to accommodate lifestyle changes needed for a new child. On such occasions teaching duties were rearranged. The School will promote the paternity leave scheme.

Amongst the PS staff, two have taken paternity leave. Recently, one PhD student took paternity leave; his registration was changed from full to part-time, supporting him and his new commitments.

One member of PS staff is going through the adoption process with full School support.

[98 words]

ACTION: Raise awareness of opportunity of paternity leave with an information campaign (A12).

(vi) Flexible working

Provide information on the flexible working arrangements available.

The School proactively promotes a flexible working culture, as advertised by the postcard campaign.

Academic hours are arranged with the HoS and researcher hours with the PI or Head of Research Group. For PhD students a formal University process is approved by supervisors and the HoS, and PS staff hours are arranged with the School Operations Manager. Examples for both genders include:

- Staff near retirement, wanting to reduce time ranging from 0.05 to 0.6 FTE and focussing exclusively on either research or teaching;
- Staff with family who need to balance time at work and home;
- Staff with severe illness, or have a close family member with severe illness, and need either extended leave or reduced time to manage illness;
- Staff with bereavement and the need to flex their work time, even for extended periods;
- Staff who are preparing for adoption.

<https://intranet.birmingham.ac.uk/hr/leave/flexible/index.aspx>

Would working flexibly help your work-life balance?

Are you aware of University opportunities for flexible and part-time working?



& please contact the Equality and Diversity Chair Prof Kai Bongs k.bongs@bham.ac.uk for advice.

It is this culture, a result of JUNO actions and initiatives like the awareness campaign, which has encouraged staff to understand that there is no stigma or barrier to flexible working. At present the School has a full spectrum of staff using flexible working arrangements.

Nearly 17% of academic staff have taken advantage of such arrangements in the last 3 years. In recent years, all requests for time reduction have been accommodated.

The School has several cases where staff near retirement or with significant personal challenges (illness or other) work part time (3F, 27% of the female academic staff). Some staff have joint or shared appointments with other and the School has collectively worked to reschedule teaching and administration, with colleagues undertaking additional responsibilities.

The School achieves this flexibility through a collegiate culture developed over time. Research groups are extremely effective for short term emergency cover. For longer changes, contract time reduction is fed into the School's staff planning model which in turn is used to acquire funding for replacement staff.

"Importantly there are no longer any concerns that taking time out to deal with family issues could detrimentally affect career progression. That culture has thankfully disappeared. It is not just staff with young families that benefit from this flexible mind-set, but those who may have a family crisis... what impressed me most was the willingness and ability of not only the senior management within the School to handle my family crisis, but also of my colleagues to take on additional duties in order to provide a window of time for me to deal with a loss..." **Chris Mayhew, Head of Molecular Physics**

[415 words]

(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.

The School is flexible in accommodating the needs of those who are returning back to work, either full-time or part-time. Returners have benefited from the flexible working possibilities outlined in section 5.5 (vi), and from the same conditions applied for maternity /paternity/adoption/returners. Staff have defined their transition back to work through adjustment of their fraction of FT. Female staff have also benefitted from the EPSRC funded Developing Leaders programme (see section 5.5 (iii)).

“In 2013 I had a series of major operations... I was off work for an extended period. I then had a gradual return to work... I was able to gradually build up my teaching load in a manner that I was comfortable with... The process was very easy and the School has been supportive throughout...” **Ian Stevens, Senior Lecturer**

Individuals with line managing responsibilities have provided significant individual support in re-establishing research, building national and international profiles and re-developing a credible publication track record for those returning after career breaks. **Career breaks are taken into account appropriately in promotion cases** (an example is given by Blackburn who was promoted shortly after returning from a career break).

[189 words]

[section 5.5 = 1487 words]

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.

Following the award of Athena SWAN Silver in 2014, the School has been viewed as a leader in gender equality with colleagues such as Prof Wilkin strongly influencing thinking within the University, e.g. the University Diversity Forum. The School has also influenced College practice through the College E&D committee (Profs Mandel and Lazzeroni).

The School is proud of its inclusive culture, respect for diversity, friendly approach and flexibility. The E&D committee has driven a culture of change in the School. Examples are the Open Day, Applicant Visit Day and the School website. All reference the School’s ambitions and achievements for equality and diversity, in particular the Athena SWAN Silver and Juno Champion Awards. The

“The committee is well advertised and active; people generally know who to go to raise any issues”. **Lead Student Rep**



Networking lunch for female staff

long-standing section linked from the main-page on equality and diversity has been refreshed to provide references to training and help and support networks.

Of all staff in the School, 93% recognise that Equality and Diversity is taken seriously by the University.

RA Network: The School has created a culture which embraces the thinking and needs of those at all levels of the School. Postdoctoral researchers have formed groups to discuss the particular challenges linked with uncertainties for these temporary positions and report to the E&DC and to HoS. Example events held to address concerns include “Development opportunities”, “How to apply for a Fellowship” and “Transition to a permanent job in academia”. The new PhD induction incorporates opportunities for students to meet and share ideas or concerns. Both RA and PG have formed an active system of reps (with an E&D rep per network, 50%F for UG and 29%F for RA) who hold regular meetings. Issues that have emerged are the desire for a tailored induction for RAs (addressed by **Action A8**), and for PG female students to increase outreach participation to help the female shortage in science subjects (addressed by the creation of the event website and the event “Public engagement with research – training session”). The RAs also have raised the point that often the training courses do not result in a certificate; this will be followed up in **Action A10**.

“I think the academic environment at the University of Birmingham would recognise academic talent independently of particular character traits of an individual.”

Work perception was investigated in a survey (gender disaggregation not available), querying the influence of informal meetings (29% of research staff recognised their influence, and 15% of those noted that not all people may participate equally) and of personal confidence (55% agreed that confidence to defend one’s view in scientific debates is important for success). The survey indicates a general awareness of gender imbalance (44% of respondents would aim at a better gender balance in organizing conferences and events, with 70% of respondents aiming at parity or a balance representative of the field).

The E&DC again used **a series of postcards to:**

- Promote E&D news and activities,
- Advertise E&D achievements, including gender balance of colloquia and our commitment to widening participation in public engagement,
- Advertise specific opportunities like the Leadership Programme for female UG/PG students,

The Equality and Diversity committee would like to hear your suggestions.



We have had role model talks including Dame Jocelyn Bell Burnell and Cherry Tweed.

Do you have suggestions for Role Model talks? Contact us!

The Equality and Diversity committee would like to hear your suggestions.



We have achieved gender equality in COLLOQUIUM SPEAKERS.

Can you think of other ways we can achieve equality in the School?

- Solicit new ideas for activities to promote E&D within the School, and invite our staff to suggest ways to further improve gender equality in the School.

Suggestions received include: create an Equality and Diversity Award; increase role model talks from recent graduates/PG students/young postdocs, with an attention to BAME and gender balance; invite specific speakers to improve the gender balance of research group seminars.

Following these suggestions, the E&DC and HoS are introducing an annual E&D Award to begin in 2018.

[603 words]

ACTION: increase the number of role model talks from recent graduates/PG students/young postdocs; improve the gender balance of research group seminars (A13).

ACTION: Introduce ED Award (A14)

(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.

The University is committed to dealing with harassment and bullying. Definitions of harassment and bullying and the University policy are available on the University intranet, including a Harassment Advice Service with Harassment Advisors. In 2015, the “Not On” joint campaign was launched by the University of Birmingham and Guild of Students. The University raised awareness of sexual harassment in 2016/17 through a new campaign “You Report, We Support”. Awareness raising posters have been displayed throughout the School.

Harassment can be a particular issue for postgraduate students and post-doctoral researchers. The School’s Postgraduate Welfare Tutor is a trusted individual who operates confidentially, and is a contact for

individuals with concerns about supervision and harassment. In such cases, the School nominates a senior staff member to conduct an enquiry, who reports to the HoS. If the complaint is verified, the HoS refers the matter to the Head of College and a formal review is held involving a senior academic from outside the School. This process can lead to formal disciplinary action against a member of staff, including dismissal.



The School takes complaints from UG and PG students very seriously and has progressed two cases in the last 2 years through this review process. The School has also enhanced its induction for PhD students to ensure they are aware of the complaints procedure. For students with complaints, the School allocates members of staff to provide emotional support. Given these events are rare, there has been a need to create some support structures in real time, highlighting elements of the University structure that were ineffective. The School has worked with the University to improve these, partially triggering the recent campaign on sexual harassment. The School now employs a professional (rather than academic) female Wellbeing Officer, shared with the School of Mathematics, for dealing with UG student issues.

If staff members feel they are being harassed, they can file a complaint, either to the line manager/HoS or directly to the University through the Harassment Advice Service. Through its actions in a few cases, the School has demonstrated a zero tolerance policy on harassment.

[348 words]

ACTION: Establish a task group that re-checks the School practices linked to harassment, to ensure the revised practices are robust and have uniform implementation across the School (A15).

(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.

Committee	Female	Male	Academic	Non-academic	Students	Total
School Management Group	2	8	9	1		10
Equality and Diversity	13	7	8	6	6	20
Teaching and Learning Committee	8	19	19	4	4	27
Syllabus Committee	5	12	13	4		17
Health and Safety Committee	2	9	3	8		11
Postgraduate Studies	4	20	21	1	2	24

Table 19. Committee membership, ranked in order of influence.

The School Management Group is formed from the Heads of Research Groups, the Chair of the E&D Committee (female), and the School Operations Manager (female). Heads of Group are appointed by the research groups in consultation with the HoS and

“Gender inequality is a major... In the nearly thirty years I have been working in the School of Physics and Astronomy, I have witnessed this barrier being slowly dismantled... it is clear to me that attitudes towards employees who have families have greatly softened.” **Chris Mayhew**

typically cycle through group members with the appropriate seniority. At present, the gender balance is 100%M, but historically this was not the case, and with more female professors in the School, we strive to remove this imbalance.

The E&D Committee is highly influential in the School, feeding into the School Management Group and maintaining a focus on gender areas, including creating a School sensitive to gender neutral issues. The enthusiasm of colleagues for E&D has filled this committee with those who have requested involvement, both female and male, and subsequently has a stronger gender balance than other committees.

Positions of responsibility within the School such as Head of Year, Welfare Tutor, MPAGs Coordinator, NDAWM MSc PGT Programme Coordinator, Quality Assurance Lead, Outreach Coordinator, Chair of E&D Committee and Head of UG Teaching Technicians are all posts that have been held by female colleagues, where many of these leadership activities have helped secure promotion or even transition to an open rather than fixed term contract.

[250 words]

ACTION: Address the gender balance of the Senior Management Group; target of 1-2 additional females within 4 years (A16).

(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?

Through the PDR process, the School has supported female staff to take up leadership roles outside the School and University.

The following is a non-exhaustive list of such roles.

- Prof Wilkin is Director of Education for the College of Engineering and Physical Sciences; she has been Hon Secretary of the Institute of Physics Women in Physics Group as well as being a member of the University Diversity Forum.
- Prof Elsworth, FRS, was a member of the 2014 REF physics panel, previous member of STFCs PPAN and present member of the Royal Astronomical Society Council.
- Dr Kokalova is Chair of the IoP Nuclear Physics group.
- Prof Blackburn has a variety of external roles including a member of the ILL Scientific Advisory Committee.
- Prof. Lazzeroni has roles in a variety of national and international committees including STFC PRRP, Royal Society and IPPP Committees.

[141 words]

(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 School has operated a Workload Allocation Model for over 10 years. This includes teaching and administration but has evolved to include outreach, committee membership (e.g. E&D, SAT), teaching on the MPAGS (Midlands Physics Alliance Graduate School), external examiner roles, Open Days, etc. The full admin and teaching activities, including marking, are captured with gender explicitly recorded. Activity weightings are used, accounting for the additional overhead of developing a new lecture course or new experiments for the laboratories. The WAM is publicly circulated to all staff.

The current average normalised load for male academic staff was 630 hours compared with 530 for female. For research staff the averages were 75 hours (male) and 42 hours (female), and for PGR 71 hours (male) and 87 hours (female). Due to limited numbers of female staff, the average is heavily affected by special cases, e.g. Birmingham Fellows with zero teaching (to establishing research), or by teaching needs for particular expertise. Though not perfect, staff broadly accept the principles behind the WAM and the need to be collegiate. We plan a survey of WAM effectiveness by gender.

ACTION: Survey staff opinions on WAM, by gender (A17).

Part-time staff loads are reduced pro rata. The balance across the School is monitored by the HoS and HoE annually and the balance for individuals is carefully considered. For promotion, the HoS is required to provide information on a range of activities to the College promotions committee. This includes the teaching and admin contributions, and the time associated with these activities, accounting for part time roles, the type of research area, or other responsibilities.

[263 words]

(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.

Regular meetings within the School are timed to be within the hours 10:00-15:00. Where required, business is flexed to take into consideration conflicting obligations. We plan to ascertain staff opinions on this, by gender.

ACTION: Survey staff opinions on meeting times, by gender (A17).

Social activities are largely organised locally by the research groups with timing to suit group members. The main annual social activities are the College-organised "Summer Social", the student-led "Physics Ball", and the School Christmas Party. The latter is a

time when retired members of the School are invited, and family members including children are encouraged to attend.

[91 words]

(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.

UoB developed the Birmingham Heroes campaign in which female staff such as Profs Blackburn and Wilkin (2 of 5 School members in the campaign) featured as ambassadors. This promotes individuals with important national roles or awards (e.g. Blackburn 2014 Moseley Medal and Prize, and Elsworth 2011 Payne-Gaposchkin Medal and Prize, Fellow of the Royal Society 2016).



Birmingham Heroes: Wilkin and Blackburn

For non-academic staff, the School nominates staff for the University BUAFTA awards, with recent successes including Kelly Chilton-Davies for Excellence in Teaching Support Services (2016), and highly commended nominees Kat Grover, Jennifer Clerici and collective nominations for the Physics Teaching Support Team and Physics Technicians.

The School has an active seminar programme to which staff and postgraduates are encouraged to attend. The School encourages gender balance in the selection of invited speakers; e.g. **a postcard campaign was developed as part of JUNO actions**, where postcards were distributed to staff soliciting suggestions of possible speakers. As a result of the positive campaign, in 2016/17 female speakers gave 29 talks (29%) in group seminars, and 15 talks (36%) in the School Colloquia. In 2017/18 43% of School Colloquia talks were given by female speakers. The School aims at achieving a better gender balance in research group seminars.



The School has, since 2014, instigated **Physics Role Model talks** which included speakers ranging from Prof Cherry Tweed, Chief Scientific Advisor for the UK Nuclear Waste Management programme and Dr Iulia Georgescu, Nature Physics, to Nick Stone, Deutsche Bank Wealth Management. The talks follow their personal journey through

their career, insights into managing work-life balance and raising a family in parallel with a successful career.

Leadership roles within the School occupied by female staff include Head of Year and Chair of the Equality and Diversity Committee. The Equality and Diversity Chair sits on the School Senior Management Group and also has an important role in the student facing Staff Student Committee.

[312 words]

(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.

Outreach is a major activity for the School, with an average of 150 activities/year, ranging from Masterclasses, Summer Schools and Work Experience weeks to an annual Physics Quiz that attracts about 400 students. A recent focus has been on widening participation by targeting Schools without a tradition of sending students to University, especially for Physics degrees.

For the activities with recorded gender balance, **52% of attendees have been female with a higher balance of female teachers (60%) for teacher training activities.**

In the 148 outreach activities of 2016/17, 168 undergraduate and postgraduate students were involved. The gender balance was 93 (55%) female, 75M.

Outreach is endorsed enthusiastically by department members at all levels; most actively by 5 professors (2F/3M), 2 readers (2M), 2 lecturers (2F), and a large number of post-doctoral fellows and research students (30%F). Significant public engagement activities are recognised in the School's WAM database. The core team is: Dr Maria Pavlidou (950 hours on the WAM 2016/17); Prof Cristina Lazzeroni (100 hours on the WAM 2016/17 and part of her promotion case); Dr Kostas Nikoloupolos and Prof. Bill Chaplin (leaders in Arts & Science activities); and Prof. Andreas Freise (leader in engagement via computing). Until summer 2018, Dr Pavlidou was co-funded as the Ogden Trust Outreach Officer within the School; the School gave Dr Pavlidou an open contract, demonstrating the School's long term commitment to outreach and public engagement.

Prof Lazzeroni has held a STFC Public Engagement Fellowship, Particle Interactions. She has brought the international HiSPARC school network (introducing students to real research via projects

Student: "The project has had an impact on the way I think of science in the future; particularly my future, as the work that we did to get this far has proved that even though the level of work is beyond A level content, we all managed and succeeded."

with cosmic ray showers) to the Midlands. Schools include those in disadvantaged inner-city areas. Four of the eight local schools who joined HiSPARC are girls' schools. The effect on a particular girl school in an under-developed part of the city has been examined closely and a marked increase in confidence and attitude to physics has been

observed as a result of the project; all 12 girls participating during 2016 have decided to continue their studies to higher education, and 90% to study a STEM subject.

[392 words]

[section 5.6 = 2434 words]

[section 5 = 6774 total words]

SILVER APPLICATIONS ONLY

6. CASE STUDIES: IMPACT ON INDIVIDUALS

Recommended word count: Silver 1000 words

Two individuals working in the department should describe how the department's activities have benefitted them. The subject of one of these case studies should be a member of the self-assessment team. The second case study should be related to someone else in the department. More information on case studies is available in the awards handbook.

Professor Nicola Wilkin

*Nicola is a theoretical physicist who has strong interests in education and has progressed in 2017 to the role of Director of Education for the College of Engineering and Physical Sciences. She shares her time between this role and teaching responsibilities in Physics. She has been an outstanding leader in setting the E&D agenda. She has benefited from **flexible part time working** both in the past, and now due to the illness of her daughter.*



I have been involved with the equality agenda -and specifically Women in Physics since I was a postgraduate student. I remember being somewhat sceptical as to why this outreach was needed, and the time that Helen Gleeson (who was organising) took to listen and answer my concerns. I am now well aware of the impact that a passing remark can have on our future generations. I have really enjoyed being able to speak at WISE meetings on campus, and supporting the Birmingham chapter of oSTEM (out in STEM) as their academic mentor. Nationally, I have been Hon Sec of the Women in Physics Group, and a member of the Institute of Physics Council. These opportunities, of what I thought were for the community's benefit, have proven to be excellent CPD for the roles I now hold within the University.

I co-led the School's successful Athena SWAN Silver submission in 2014. This time round my role in the submission is more advisory. Why? Equality processes need to be embedded, and for this one needs to plan for succession in the roles. In addition, I am now Director of Education for the College of Engineering and Physical Sciences, oversight of the education of ~5000 students. This substantial leadership role enables me to ensure that E&D issues are central to decisions that are made within the education arena at the University. The University has supported me through this transition with both internal and external leadership training: LFHE Aurora and Leading transition in Teaching and Learning, and the University's Senior Leadership Programme.

I mentor and support (both informally and via the University Aurora networks) a significant number of female colleagues across the College, and the wider University - and it is really pleasing to see how many of them have been promoted. Nearly all have suffered to some extent from imposter syndrome, something I well recognise. It was also an issue that came up frequently amongst our plenary speakers at the ICWIP2017. It is a motivation for our strategy of building networks at all levels: international conferences, the women's professorial network at the University, and the leadership workshop for students.

On a personal note I have unfortunately benefitted from the more transparent flexible working arrangements I helped implement. One of my daughter's is now chronically ill, the University's support for me personally has been very much appreciated. Of course, there are still infrastructure issues to address, for instance car parking availability after 9am.

[484 words]

Vincent Boyer

Vincent is an academic in the School and has taken paternity leave and takes advantage of flexible working.

I am a Senior Lecturer and the Head of Year 3. I joined the Cold Atoms group in 2009 and have since developed a range of research activities. I currently have a number of teaching duties, in particular experimental laboratories in the third year. I am a member of the E&DC as a representative of the academics. The administrative role of Head of Year 3, which I have taken up this year, is also keeping me busy as I am learning more about the inner workings of the school.



My partner is also a scientist; it was difficult to find two academic or research jobs in the same place and my partner works in a different city. As a result I am only semi-resident in Birmingham and have a long commute two to three times a week. Being able to find a lifestyle that can accommodate this "delocalised living" has been challenging, but I have enjoyed the flexibility offered by the school in terms of schedule. I can often work from home one day in the week and always come back home at least one night in the middle of the week. This has allowed me to remain close to my family in spite of the geographical constraints and sustain a lifestyle where both my partner and I have a scientific career.

We recently had our first child, which has added another layer of difficulty. I took three months of shared parental leave to fully take part in the event and support my partner at this important time. This has allowed me to create strong bonds with the child in spite of my schedule. The school was supportive at all levels, from the administration down to my own research group. It covered all aspects of my duties, that is to say the teaching, the administration, and the running of my research group. I found it easy to work with the teaching administration (e.g. Head of Education and Head of School) to come up with a workable solution to cover my teaching duties, which would not put an undue work load on my colleagues. I was involved all along the process, but at the same time it was clear from the onset that the onus was on the school to provide a solution that would allow me to fully enjoy my parental leave. The school also applied for and provided financial support to pay for additional PDRA time and keep my research group running during my absence. All the people involved were very helpful and the whole process ran seamlessly in spite of the novelty of the scheme, thanks to the strong collegiality of the school.

[463 words]

[section 6 = 947 Total word]

7. FURTHER INFORMATION

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

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

The School won the bid and hosted the 2017 International Conference on Women in Physics.

The well-recognised world-wide shortage of women studying and working in physics has been acknowledged by the International Union of Pure and Applied Physics and the union organise a triennial event IUPAP International Conference on Women in Physics (ICWIP).



The Conference hosted 250 participants (90% women) from 49 countries around the globe. The 4-day conference programme included plenary invited talks from female scientists and leaders of their field, workshops (gender studies and intersectionality, improving the workspace/science practice and ethics, professional development and leadership, cultural perception and bias, physics/science education), and poster sessions with 90 seconds teasers highlighting the reality of women in science around the world. It also hosted the ceremony for the Institute of Physics President Medal to Dame Jocelyn Bell.



Taking advantage of the connection with the local area and schools, the School was able to secure the participation of Malala Yousafzai, 2014 Nobel Peace Prize. Malala joined the conference, participating in the poster sessions and workshops discussions.

Other aspects of the programme that were introduced by Birmingham were:

- Secure considerable external funding to fully support a large number of participants from developing countries: young women who would otherwise never have the opportunity;
- This conference explicitly stated that men are included in this initiative; this has considerable impact in an increasingly polarised world;
- Public engagement training and Continuing Professional Development opportunities, including a training session of the "People Like Me" project;
- The "day in the lab" extension where delegates were invited to tour local laboratories and research facilities;
- Highlighting direct connections between innovation and industry;

“The impact of language on females' sense of fitting in or belonging in the world of Physics has been underestimated. A more critical assessment of language used when engaging with schools, recruiting to STEM roles and when promoting people would seem to be a worthwhile way to ensure larger numbers of females feel they belong in the STEM world”. **Session leader**

“Being from a remote underdeveloped area of third world, I was inspired by the full-fledged/equipped running Labs in the University of Birmingham. I wish I, or at least my students could have access to such labs. I would request IUPAP to facilitate visits of young women physicists from third world countries, in their early carriers to such fully equipped labs to enhance their skills.” **Prof Dr Anisa Qamar, University of Peshawar, Pakistan**

As a direct result of discussions at ICWIP 2017, Pakistan has become a member of IUPAP, largely as a result of the initiative of the women at the conference. In addition, a South Asian group in Women in Physics has been set in motion, also a direct result of meetings at ICWIP2017. **Irvy Gledhill**

[459 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.

Action Reference (Priority)	Rationale	Action	Action owner	Timescale	Milestones	Success Measure
A1 (High)	Greater ownership of Athena Swan objectives in School must be achieved	Ensure that the activities associated with the creation of the Athena SWAN culture are owned by a broad range of individuals. Increase the number of staff taking the E&D training. Survey the effectiveness of E&D training.	E&DC, staff	04/18-10/19	<p>Creation of working groups with specific tasks responding to action plan, coordinated by the E&DC.</p> <p>The E&DC will present the progress of Athena Swan Action Plan at the School Committee and Senior Management Team.</p> <p>The E&D training statistics will be monitored yearly.</p> <p>A survey to establish effectiveness of</p>	<p>No individual o working groups performs more than 10% of workload on E&D tasks.</p> <p>More than 90% of School staff will have taken the E&D training.</p> <p>Survey will reveal</p>

					training will be put in place.	awareness of Action Plan and its progress.
A2 (Medium)	Foundation/A2B programmes are opportunities to recruit more UG female students.	Market these programmes more strongly with local schools. Tables updated each year and analysed by the E&DC	Outreach team, Admission Tutor, E&DC	04/18-04/22	Brief annual report from Admission Tutor and E&DC to the Teaching Committee.	50% increase in number of female students from these programmes within 1-2 years.
A3 (Medium)	Risk of possible biased distribution of grades for female UGs as result of exam structure change.	Check effect of changes in exam structure in 2016/17 in Y3 and Y4, in 2017/18 in Y2. Tables updated each year and analysed by the E&DC and by the HoE	HoE, Chair of Syllabus Committee, HoS, E&DC	04/18-04/22	Brief annual report from HoE and E&DC to the Syllabus Committee, with recommendations if bias definitely starts to appear. Priority of action will be revised accordingly.	Maintain the percentage of 1 st /2.1/2.2 for females consistent with those for males.
A4 (High)	Number of female PGR students in the School is below the national sector average.	A4.1: Rebalance the message of academic vs non-academic career; improve awareness for internal students of opportunities offered by PhD. Repeat the female Leadership workshop. A4.2: Develop best practice for PhD adverts and implement it across the School. Improve PhD	Chair of the Graduate Studies Committee, HoS	08/18-04/22	A4.1: Organize 2 meetings (1 within the Women in Physics College Network) per year with female UG and current PhD students, young RAs and recent graduates, to illustrate skills required in a PhD and the future opportunities that it creates. Create a Physics Open Day for internal and external applicants, including all research groups. Repeat the female Leadership workshop. Particularly encourage female	Increase the % of female PGR by 2% each year until the RG average is achieved.

		application process to make it more gender neutral.			students to apply for PhD. A4.2: Improved advert text is created and used uniformly across the School. Application process is clearly specified to applicants (including project proposal guidelines), and it is reviewed across the School; include different elements of assessment and include tour of facilities, meeting current PhD students etc..	
A5 (High)	Low number of female staff	Develop best practice for job adverts and implement it across the School, to ensure School is viewed positively by potential female applicants. Continue to proactively seek female candidates for open positions.	Heads of Research Group, HoS, Operations Manager, Chair of the E&D Committee	04/18-04/22	Job advert process is in place; formal sign-off process of all job adverts is introduced. Use search committees uniformly across the research groups, to identify and encourage female applicants. Interview process is reviewed: extend interviewing list to include at least one female applicant; include different elements of assessments (research as well as teaching, etc.)	Hire female staff at or above the current female ratio. Inspirational target of 30% by 2023.
A6 (Medium)	Lack of awareness about the option of promotion for RAs	Information campaign targeted at RAs, and line managers.	Heads of Research Group, HoS	04/18-04/20	Promotion mentioned in all PRD paperwork.	Increased number of promotion applications by

						10% in 4 years.
A7 (Medium)	Risk of possible biases in staff leavers	Information campaign to record the next destination and main reason for leaving.	Heads of Research Group, Operations Manager	04/18-04/20	Questionnaires will be offered uniformly to all leavers. Exit interviews with line manager will be put in place.	Full record of leavers destinations and reason for leaving. Situation is reviewed in 4 years with the new data.
A8 (High)	RA focus group indicates induction is patchy	Improve induction process in the School, to be uniform and high standard. Improve attendance of College induction process.	Heads of Research Group, Operations Manager	04/18-10/19	RA Induction process is reviewed. Recommendations are made to the School and College. HoS keeps record of induction attendance. Survey after 2 years.	All new post-docs attend induction. Survey indicates how useful induction it was
A9 (High)	Existing survey indicates PDR not always optimal. Data not available by gender.	Achieve 100% PDR taking. Collect feedback (by gender) on PDR process, and improve it accordingly.	HoS, Heads of Research Group, Operations Manager	04/18-10/19	PDR process is reviewed. Survey on PDR conducted. Recommendations are made to the School and College.	Target of 100% PDR completion by 2019. Survey on PDR by gender indicates how useful PDR is
A10 (Medium)	Low attendance of training courses for RFs. The absence of completion certificate is a factor.	Promotion of opportunities of training courses, specifically for female RFs. Development of completion certificates for training courses.	HoS, Operation Manager	04/18-04/20	Inclusion of training courses in PDR process, particularly for female RFs; provide PRD reviewers with list of training courses. Recommendation for the introduction of certificates is made at College level.	Increased female attendance in training courses. Certificates are introduced in at least 10% of

						available courses.
A11 (Medium)	POD courses are over-subscribed	Lobby University for increased POD courses provision.	HoS, Operation Manager	04/18-04/20	A system through which courses can be booked with 6 months advance is created.	Provision of POD courses is increased. All staff wanted to attend a course, can do so within 6 months, by 2020
A12 (High)	Only 1 paternity leaver, while other staff preferred other options	Raise awareness of opportunity of paternity leave with an information campaign. Further campaign based on result from national survey.	HoS, Operations Manager	04/18-10/20	Produce briefing notes on paternity leave for induction pack. Advertise to current staff.	Survey reveals increased awareness across the School.
A13 (Medium)	Feedback from postcard campaign and focus groups indicates desire of more research role models	Increase number of role model talks done by UG/PG/young RF. Better gender balance in research group seminars	HoS, E&DC, Heads of Research Groups	04/18-04/22	Suggestions of speakers are followed. List of potential speakers is formed. More potential speakers are identified by research groups looking at conferences and other institutions' seminar lists.	Fraction of young female role model speakers is increased to 50% in 2023. Gender balance in research seminars matches that of Colloquia by 2023.
A14 (Medium)	Need to reward ED effort	Creation of annual School ED Award	EDC, HoS	04/18-04/19	Creation of award panel. First awards start in 2019.	Publicize and run award ceremony

						annually.
A15 (High)	Need for continuous awareness raising of harassment procedures	Establish a task group that re-checks the School practices linked to harassment, to ensure the revised practices are robust and have uniform implementation across the School	HoS, Operations Manager, Welfare Tutors (UG and PG).	04/18-04/20	Produce a report that is propagated to all staff. Revised practice is put in place.	School survey reveals 100% awareness of procedures. Heads of Research Groups fully and uniformly endorse revised practice.
A16 (High)	Gender imbalance in senior management group	Seek to ensure that the gender balance of the Senior Management Group is addressed when there is a rotation of post holders.	HoS, Heads of Research Groups	04/18-04/22	Possible female candidates are identified. Option of Leadership Course attendance is discussed in PDR.	Achieve at last 1-2 further female members by 4 years
A17 (High)	Need to establish female staff opinions on WAM, work meeting times and social opportunities	Collect feedback (by gender) on WAM, and lobby to improve it accordingly. Collect feedback (by gender) on meeting times, and social opportunities.	HoS, E&DC, Heads of Research Groups	04/18-04/20	Produce a report that is propagated to all staff. Revised practice is put in place.	WAM is improved according to result of survey. Revise policy, if necessary, is put in place for meetings and social gathering.



This guide was published in May 2015. ©Equality Challenge Unit May 2015.

Athena SWAN is a community trademark registered to Equality Challenge Unit: 011132057.

Information contained in this publication is for the use of Athena SWAN Charter member institutions only. Use of this publication and its contents for any other purpose, including copying information in whole or in part, is prohibited. Alternative formats are available: pubs@ecu.ac.uk