



Department Application Bronze and Silver Award



ATHENA SWAN BRONZE DEPARTMENT AWARDS

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

9ATHENA 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

Table of contents

Section	Page	Recommended word limit	Actual word count
1. Letter of endorsement	6	500	574
2. Description of the department	8	500	499
3. Self-assessment process	10	1000	1176
4. Picture of the department	18	2000	1927
5. Supporting and advancing women's careers	31	6000 (Bronze) 6500 (Silver)	6196
6. Case studies (Silver only)	55	n/a (Bronze) 1000 (Silver)	996
7. Further information	59	500	350
Total		10,500 (Bronze) 12,000 (Silver)	CURRENT 11,718

Table of acronyms

Abbreviation	Full term
AM	Academic Manager (staff grade)
AS	Athena SWAN
CACPR	Centre for Atmospheric and Climate Physics Research
CAR	Centre for Astrophysics Research
E&D	Equality and diversity
ESS	Equality Staff Survey
F	Female
F/T	Full-time
FTE	Full-time equivalent
IWD	International Women's Day
M	Male
P&A	Physics and Astronomy (programme)
PAM	School of Physics, Astronomy and Mathematics
PGR	Postgraduate research
PSS	Professional and Support Staff
P&T	Professional and technical staff
P/T	Part-time
RDF	Researcher Development Framework
RDP	Researcher Development Programme
SAT	Self-Assessment Team
SEG	School Executive Group
SEPnet	South East Physics Network
SL	Senior Lecturer
UG	Undergraduate
UH	University of Hertfordshire
WIP	Women in PAM (working group)
WPN	Working Parents' Network

Name of institution	University of Hertfordshire
Department	School of Physics, Astronomy and Mathematics
Focus of department	STEMM
Date of application	28 April 2018
Award Level	Silver
Institution Athena SWAN award	Date: April 2015 Level: Bronze
Contact for application <small>Must be based in the department</small>	Dr Kristen Coppin
Email	k.coppin@herts.ac.uk
Telephone	01707 289446
Departmental website	https://www.herts.ac.uk/apply/schools-of-study/physics-astronomy-and-mathematics

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.

Sarah Dickinson Hyams
Head of Equality Charters
Equality Challenge Unit
7th Floor, Queens House
55/56 Lincoln's Inn Fields
London WC2A 3LJ

14th May 2018

Dear Sarah,

Athena SWAN (AS) Silver application, School of Physics Astronomy & Mathematics

I am very happy to write in support of our application for an AS Silver Award.

I commenced my role as Dean in late 2016, although with a long previous career within the School including a one-year term as Acting Dean and a decade of being the School's Admissions Tutor. As Admissions Tutor I was face-to-face with the challenges of attracting young women into science, which has made me place equality and diversity (E&D) as a top priority so that we can address these challenges. I also have two school-age children and a working wife, so I fully understand the benefits that family-friendly policies can have upon our staff and students.

One of my first actions as Dean was to raise the profile of our AS SAT by transforming it into a key part of our administrative structure and formalising its position as the School Equality Committee (EC). The Chair (who with the deputy Chair is allocated a workload) is a member of the senior management team and reports to our School Executive Group (SEG). E&D issues are now standing items on both the SEG and School-wide meetings.

I am an active member of the EC and have been pleased to support its work on a range of matters key to embedding a culture of diversity and inclusion, not just in terms of gender but also addressing diversity in respect of other under-represented sections of the student and staff populations. AS has been a central part of our efforts to continually improve gender equality at all levels across the School. Some examples of the impact we have made since our Bronze award include:

- Female academic and research staff numbers have been raised to 16, up from just 9 in 2014.
- Unconscious Bias training for staff and postgraduates has been mandatory in the School for some time and in 2017/18 was added to the timetabled undergraduate programme.

University of Hertfordshire
Higher Education Corporation
Hatfield, Hertfordshire
AL10 9AB

Telephone +44 (0) 1707 284000
Fax +44 (0) 1707 284115
Website www.herts.ac.uk

**School of Physics Astronomy
& Mathematics (PAM)**

Tel: 01707 284805
Fax: 01707 284115

m.a.thompson@herts.ac.uk
<http://go.herts.ac.uk/pam>

- Visiting-group hours hosted by female students on our outreach programme were increased to 26% in 2016/17 and 37% in 2017/18 (up from 18% from 2010/11-2012/13).
- The breadth of women's forums and similar activities have increased significantly, providing senior female academics/researchers as role models for more junior staff and students; e.g. our monthly PAM Prestige Colloquium has now run for 4 years and consistently achieved a gender-balanced speaker ratio (57%F:43%M).
- We received positive feedback from our recent IoP Juno Champion visit (see Section 7), with the panel recognising the clear leadership on E&D within the School.

Over the past few years we have seen challenges in recruitment and retention of female staff, and we are working towards overcoming these issues. We have revamped our appraisal system to provide positive mentoring support for staff, and encouragement to apply for promotion.

We are committed to embedding a genuine culture change in our processes to ensure fairness and equality from undergraduate to professorial level. New developments over the forthcoming year are outlined in our ambitious action plan, and I am supported in this task by the entire School senior management team, and greatly aided by our EC who have given us a very clear steer for our forward progress.

I can attest that the information presented in this application (including qualitative and quantitative data) is an honest, accurate and true representation of the School.

Yours sincerely



Dr Mark Thompson
Dean of the School of Physics Astronomy & Mathematics
University of Hertfordshire

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, Astronomy and Mathematics (PAM) is one of ten Schools at the University of Hertfordshire (UH). Undergraduate (UG) students are split across two programmes: Physics & Astrophysics (P&A 48% - 2016/17 FTE) and Mathematics (52% - 2016/17 FTE), with women accounting for 33% of students (25% P&A; 41% Maths; 2016/17 FTE). Two-thirds of the students identify ethnically as “White” (68%), with 23% “Asian”, 7% “Black” and 3% “Chinese”. Staff and student numbers are shown in **Table 1**; figures for the female contingent from the 2014 Athena SWAN (AS) Bronze submission are shown for comparison. Physics (including astronomy) is the major staff group, and accounts for most of the research, so the female fraction of academic staff (15%) predominantly reflects physics. A significant proportion of staff (~40%) are 1st or 2nd-generation migrants, giving the School a diverse, international feel.

The Centre for Astrophysics Research (CAR) and the Centre for Atmospheric and Climate Physics Research (CACPR) are the two main research centres in the School. We submitted 35 staff (8F (23%), 27M) to REF2014, mostly in physics, out of 48 eligible staff (8F (17%), 40M), indicating that 100% of eligible women were submitted.

The School committed to the Institute of Physics (IoP) Juno programme in 2013, and recently (2018) achieved renewal of its Juno Practitioner award; the renewal feedback is provided in Section 7.

Post-Bronze-Award Impact: Academic and research staff numbers (**Table 1**) now incorporate 16 (23%) female staff, up from just 9 in 2014.

PAM membership	Total	Male # (%)	Female # (%)		F% Benchmarks
	2018		cf. 2014		2016/17
Academic Staff	46	39 (85%)	7 (15%)	8 (20%)	18% (IOP/HESA)
Research Staff	25	16 (64%)	9 (36%)	1 (7%)	
PGR Students (FTE)*	27	23 (85%)	4 (15%)	8 (21%)	29% (IOP/HESA)
UG students (FTE)*	359	240 (67%)	119 (33%)	134 (43%)	
UG Maths (FTE):	186 (52%)	110 (59%)	76 (41%)		38% (ECU) 36% (IOP/HESA)
UG P&A (FTE):	173 (48%)	130 (75%)	43 (25%)		23% (IOP/HESA)
Professional & Technical (P&T) Staff	7	2 (29%)	5 (71%)	3 (100%)	n/a
Notes: * Student numbers are based on 2016/17. The numbers and % are for FTEs, but P/T numbers are small so these figures are broadly representative of F/T figures					

Table 1. Numbers and gender percentages of staff and students.

The School Executive Group (SEG – see **Figure 1**) comprises the Dean of School (M), the three Associate Deans (Learning & Teaching, Academic Quality, and Research; all M)

and staff with other major responsibilities – two Research Centres, Admissions (M), Finance (F), Health & Safety (M), HR (F), Administration (F) and Equality & Diversity (E&D - F). The SEG meets six times per year. The School has three other major forums for staff and student input: the School Academic Committee (meeting four times per year) which has staff and student representatives concentrating on formal academic matters, the Programme Committee (twice per year) which is the major joint staff-and-student committee concerning teaching and learning, and the School Meeting (three times per year) which is the major all-staff forum. Each School Meeting receives a “Short Report from the Dean” which records the successes of women (and men) in the School, e.g. grants awarded, honours bestowed, professional recognitions and postgraduate completions, so news about individual achievements are publicised and acknowledged, including those of female staff who may be less likely to self-promote¹. These forums also have E&D standing items on their agendas, to raise awareness of and engagement with E&D issues.

The Chair of the Equality Committee (EC) is a senior academic (F; Reader) within the School, and has a voice in all of the forums starred in **Figure 1**. Other members of the EC (e.g. Dean and Associate Deans) also serve on many of these committees.

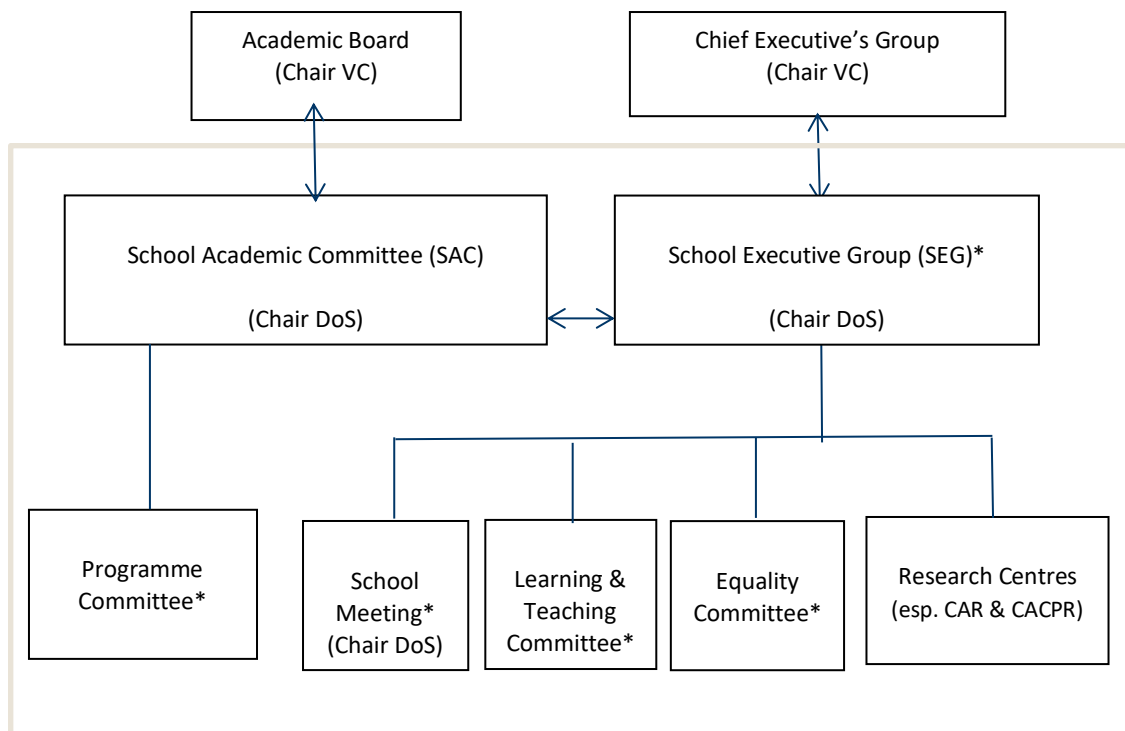


Figure 1. School committee structure and its relationship with major University boards. Asterisks (*) denote committees on which the EC Chair is a member.

499 words

¹ Clayton, J. 2011. *Science*, “Fix the system, not the women”
<http://www.sciencemag.org/features/2011/01/fix-system-not-women>

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 School declared itself a Juno Supporter in 2013 and set up the EC/AS Self-Assessment Team (SAT). This work was led by the then Dean of School (M; Professor) and the Physics Programme Tutor (M; EC Chair), who were also founding members of the University's AS SAT. We were awarded Juno Practitioner and AS Bronze awards in 2015; the former was renewed in 2018.

A new Dean (M) was appointed in December 2015, and has become a committed member of the EC. A new EC Chair and AS Champion (F; Reader) was appointed in 2016. The AS Champion and two other EC members (M; Professor & Reader) are members of the University AS SAT, and the AS Champion is also a member of the central AS Champions' Network, providing an opportunity to share good practice and to link School and University AS activities. The EC also nominated an 'Equality Champion' (F; Senior Research Fellow) in 2016 to act as a confidential contact for staff and students regarding any Equality issues.

Membership is revisited regularly, and new members from underrepresented areas have been added. Consequently, there has been considerable growth in male (and total) membership, now comprising 11 women (48%) and 12 men (52%) including professional and support staff (PSS). It covers a diverse range of life and work experiences including parental/maternity leave, flexible working, and early career status (see **Tables 2 & 3**). Two members (1 postdoc and 1 student) are from BME backgrounds (9%), and one-third are from overseas.

Grade/Stage	Nov 2014			Jan 2018		
	M	F	Total	M	F	Total
Professor	2	1	3	2	0	2
Faculty	2	2	4	6	2	8
Postdoc	1	1	2	0	3	3
Professional & Technical	0	2	2	2	4	6
PGR	1	1	2	1	1	2
UG	0	1	1	1	1	2
Total	6	8	14	12	11	23

Table 2. EC membership in 2014 and 2018

Post-Bronze-Award Impact: Evolution of the EC has been very positive: the EC is now bigger, broader, more gender-balanced and more vibrant than in 2014 (**Table 2**).

EC work is recognised in the School workload model, which is sent to all academic staff. All staff have an administration allocation which provides time for committee work, while the Chair/AS Champion and Deputy Chair positions come with additional workload allocations.



Figure 2. EC AS working group meeting in 2018 (subset of those present)

Name	Job Title	Athena SWAN Role	Other roles in School
Mr David Campbell (M)	Principal Technical Officer	Technical staff link	Bayfordbury
Dr Kristen Coppin (F)	Reader of Astrophysics	Chair of EC, AS Champion	AS SAT Deputy Admissions Tutor
Dr Reto Dorizzi (M)	Lecturer	Deputy Chair of EC, Data analysis	Member of UH Pastoral Care Group
Dr Mark Gallaway (M)	SEPnet/Ogden Outreach Officer	Outreach perspective	Outreach events
Dr James Geach (M)	Reader of Astrophysics, Royal Society University Research Fellow	AS Link, Data analysis	AS SAT alternate
Dr Sarah Goler Solecki (F)	AS Officer	Data analysis, interviews and focus groups, overall application support	E&D advisor
Ms Elena Gonzalez Egea (F)	PGR student	Research student link	

Prof. Martin Hardcastle (M)	Professor of Astrophysics, Director of Centre for Astrophysics Research	Women in Science	PAM IT+HPC
Dr Evelyn Hesse (F)	Senior Research Fellow	Data analysis, PAM Prestige Colloquia organiser, PAM Equality Champion	
Dr Steve Kane (M)	Associate Dean – Academic Quality	Women in Science	Chair of Exam Boards
Ms Suzanne Locke (F)	Administrative Manager	Professional staff School rep	
Mr Vijay Mahatma (M)	PGR student	Research student link	Rep for all SEPnet PGR students
Dr Alan McCall (M)	Senior Lecturer	Data analysis	P&A Programme Tutor, Member of BME working group
Dr Maria Monguio Montells (F)	Postdoctoral Research Fellow	CAR postdoc link, Women in Science	
Mr Oliver Read (M) / Ms Michelle Bieger (F)	Final year UG student(s)	UG student link	School Community Officer (SCO) / outgoing SCO
Ms Carrie Ricketts (F)	Senior Lecturer	Women in Maths/Science	PAM placement tutor
Ms Diane Rodgers (F)	Human Resources Manager	HR link / UH policy advisor	PAM HR Business Partner
Dr Shital Rohekar (F)	Postdoctoral Research Fellow	Phys Research link	Research Laboratory
Dr Samantha Rolfe (F)	Senior Technical Officer	Technical staff link	Bayfordbury
Prof. Sean Ryan (M)	Professor of Astrophysics (former Dean)	Data analysis, PAM Prestige Colloquia organiser, Co-writer of Juno/AS case	Executive Director of SEPnet (2018-2021)
Dr Jason Stevens (M)	Reader of Astrophysics	Undergraduate admissions/open days	Admissions Tutor
Dr Mark Thompson (M)	Principal Lecturer, Dean of School	School budget holder	Research

Table 3. Membership of the PAM Equality Committee at 30/1/2018

(ii) The self-assessment process

Equality Committee: The expanded EC has convened six times since 2016, with four working groups meeting as needed, covering: *quantitative data*; *qualitative data* (interviews/focus groups); *Women in Science Network* (activities to support PAM women); *staff handbook/wiki/webpages*.

Post-Bronze-Award Impact: Our previous action plan included the development of a School 'wiki' to raise staff and students' awareness of University and School policies and procedures (e.g. promotions, flexible working, etc.). The wiki has received ~3700 non-editing views in the past year, as a measure of its usefulness.

The EC discusses progress toward gender and BME equality, leads policy development, and discusses ways of obtaining and interpreting quantitative and qualitative data to influence decision-making. Members of the EC are identified for taking specific actions, communicating progress in the School. The EC is an embedded structure within the School: the Chair is a member of (and thus reports to) various committees, which were discussed above.

Staff awareness: Our Juno and AS action plans and award applications have always been publicised to the School and via our website. Our 2017 PAM Equality Staff Survey (ESS) revealed that:

- 89% of staff (100% of women and 89% of men) are “aware of the School working towards further Juno/AS awards”.
- 62% of staff (88% of women and 52% of men) agreed that “Juno and AS have had a positive effect on the culture within the School”.

While this recognition is encouraging, nevertheless:

- 20% of men disagreed that Juno and AS have had a positive effect.
- 28% of men and 13% of women answered, “Not applicable”.

These responses indicate that we have more to do to raise awareness of the outcomes of AS activities for both women *and* men, particularly relating to the AS/Juno action plans (**Action A01**).

Action A01: Raise awareness amongst staff and students of E&D activities and positive outcomes for all staff, via face-to-face and online communication, e.g. lunchtime seminar presenting E&D data and actions/progress; add case studies of flexible working by men, not just women, to website.

Internal and external consultation: The EC organised various strands of internal (**Table 4**) and external (**Table 5**) consultation with staff and students to gauge views on a broad range of issues covered by the submission, review our action plan, reflect on current practices and biases, and identify challenges and ways of overcoming them.

Post-Bronze-Award Impact: Since academic year 2017/18, Unconscious Bias training has been added to the timetabled UG programme (training for staff and PGRs was already mandatory in the School).

Post-Bronze-Award Impact: it was recognised in the panel's feedback from our 2017 Juno Practitioner award renewal that the breadth of women's forums and similar activities (**Tables 4 & 5**) had increased significantly since 2014. This work will be continued (**Action A02, A03**).

Action A02: Continue our biennial PAM Equality Staff Survey and UG/PGR focus groups.

Action A03: Continue our series of women's forums and similar activities.

Post-Bronze-Award Impact: From 2017/18, the EC re-branded one "Women in PAM (WIP) lunch" per year as a "PAM Diversity Lunch" open to all. Five of the twenty participants at the first event were men, and participants spanned the range of UG, PGR, academic, technical and professional groupings.

Date(s)	Activity	Data type	Details
Ongoing	Advice from University's AS Officer throughout year	Quantitative +qualitative	Data dissemination, survey design, facilitation of focus groups and interviews, event organisation, application review
Spring 2017 (triennial)	UH Staff Survey	Quantitative +qualitative	Response rate 70%, data not desegregated
2x per year (since 2015)	Women in PAM Network lunches	Qualitative (fed back to the EC via the Chair)	Typically ~20 female PGRs, academic, research staff attend Informal forum to raise and discuss equality data/articles/issues
2x per year (since 2015)	UH AS Champions' Network meetings	Qualitative	Share information, advice and best practice with Champions from all Schools
Spring 2017	Female PGR interviews	Qualitative	All 4 female PGRs
Spring 2017	Female UG focus groups Interviews with P/T UGs	Qualitative	15 (13%) female UGs (all years) 1 male and 1 female P/T UG
Spring 2017 (biennial)	PAM Equality Staff Survey	Quantitative + qualitative	39 (26 M, 8 F, 5 'Prefer not to say') staff responses (50%) (Action A02)
Autumn 2017	Timetabled Unconscious Bias awareness and discussion session for 2 nd year UGs and PGRs	Qualitative	Discussions revealed that some male UGs regard E&D as "done", i.e. that inequality no longer exists in their generation. This finding emphasises the importance of the EC work creating awareness of current E&D data (Action A01) .
Autumn 2014	Interviews with female SLs	Qualitative	All 3 PAM female SLs

Table 4. Internal (staff and student) consultation activities since successful 2014 AS Bronze submission

Date(s)	Activity	Data type	Details
March 2018	External consultation with the IOP Juno Mid-practitioner to Champion team	Advice on our progress towards Juno Champion, and sharing good practice	IOP/Juno invited by EC Chair (Panel Feedback: "It is evident that those involved in E&D activities within the School are committed to making progress and ensuring that this work becomes more embedded")
2017 & 2018	EC members attended AS assessment panels	Qualitative & networking	2 as observer, 1 as panellist
2015-2018	EC member served on the IOP Juno Panel	Qualitative, quantitative & networking	Included making site visits to two UK universities to share good practice in their journey towards Champion status
2017	International Conference on Women in Physics (ICWIP)	Qualitative & networking	Our School's Daphne Jackson Fellow was a UK delegate, led a follow-up summary of best practice at an EC meeting
2017	EC Chair invited to join the Juno on-line discussion forum and SEPnet's E&D Champions Network	Share information, advice and best practice	1 attended; valuable networking on E&D
May 2017	Juno practitioners' network meeting at Kings College London	Qualitative & networking	1 attended and contributed experience from Juno Champion visits
Dec 2017	SEPnet workshop "HE STEM Equality and Diversity - the Impact of the TEF and REF", QMUL	Share information, advice and best practice	1 attended; University's member of SEPnet
2016	EC member attended AS workshop and masterclass	Qualitative & networking	Run at UH by Averil MacDonald

Table 5. External consultation and networking activities since 2014 AS Bronze Award

(ii) [Plans for the future of the self-assessment team](#)

The EC will continue to meet at least 3x per year (with working groups meeting more regularly to work on prioritised actions), and its Chair will continue as a member of SEG,

the L&T Committee, University SAT and Champions' Network. The work of the EC is highlighted to UG/PGR students during their induction, with further information accessible via our EC public-facing webpage and promoted through EC-led initiatives (e.g. annual PAM International Women's Day events, termly networking lunches, posters, student wiki).

The EC will continue to collate and analyse statistical and qualitative data, monitor the implementation of the action plans, identify areas where change has taken place, and add new actions as required in pursuit of E&D (**Action A04**).

One finding from our WIP focus groups was that there was some resistance to/denial of the need for E&D actions among some male PGRs, echoed also in the UG Unconscious Bias discussions (**Table 4**). This demonstrates the need for more E&D awareness (**Action A01**), and greater encouragement to staff and students to raise matters of discussion or concern with the Equality Champion (**Action A05**).

Post-Bronze-Award Impact: This resistance was brought to the attention of the University SAT, and E&D and Unconscious Bias training is now mandatory for all PGRs University-wide.

Membership of the EC is reviewed annually, and new or replacement representatives are added as needed (see **Table 2**). The term of the Chair is not specified, but the former Chair spanned the successful AS Bronze, Juno Supporter and Juno Practitioner submissions, so it is likely that the current Chair will be invited to remain to pursue an IOP Juno Champion award, but flexibility exists as other opportunities arise. The Dean of School would then make a call for expressions of interest and appoint a new Chair.

Action A04: Ensure that E&D matters are incorporated into strategic and operational planning in the School, and that these address students directly, not just indirectly, including providing E&D awareness training and leadership workshops.

Action A05: Further promote our Equality Champion to staff and students as a confidential contact & monitor uptake, e.g. encourage engagement via termly AS/Juno drop-in sessions.

1176 words

4. A PICTURE OF THE DEPARTMENT

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

4.1. Student data

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

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

N/A

(ii) Numbers of undergraduate students by gender

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

Our programmes are offered F/T (>95% of students) and P/T (<5% of students). Women account for 33% (**Table 1**; 2016/17 FTE; mathematics 41%, physics 25%). Under-representation of women in physics is a long-standing national problem², and the School remains committed to increase the profile of women through a wide range of activities. These already include ensuring that recruitment and outreach programmes have high levels of female involvement.

Post-Bronze-Award Impact: On our outreach programme, visiting-group hours hosted by female students has increased from 18% (2010/11-2012/13) to 26% in 2016/17 and 37% in 2017/18.

Open Days always include female staff and/or student ambassadors. Our 2017 female UG focus group said that female role model presence did give them a positive impression of PAM but that they would like to see even more female staff at the event (**Action A06**). The PAM Admissions Tutor (who organises Open Days) is a member of the EC, and the EC Chair is also the Deputy Admissions Tutor; they will ensure women continue to be involved.

Action A06: Ensure continued high visibility of women on outreach and recruitment activities, including websites and promotional materials – recognising that achieving social change of the required magnitude is a long-term activity.

Despite our measures to increase the visibility of women scientists, the percentage of female F/T students enrolled has remained around 29-33% since 2010 (**Table 6**). This outcome echoes the analysis of Macdonald (2014)³ that a raft of family, school and societal pressures has kept the percentage of girls choosing physics unchanged over 30 years. We are committed to our efforts to demonstrate that women can be scientists

² Macdonald, A. (2014), "Not for people like me?" Under-represented groups in science, technology and engineering", WISE: www.wisecampaign.org.uk

³ Macdonald, A. (2014), "Not for people like me?" Under-represented groups in science, technology and engineering", WISE: www.wisecampaign.org.uk

too; in the words of Macdonald that, “Above all, girls need to be able to self-identify that ‘science is for people like me’.” (Action A06).

Year	Full-time			Part-time			Benchmark*
	F	M	F%	F	M	F%	Female%
2010/11	84	210	29%	4	16	20%	
2011/12	125	254	33%	6	16	28%	34% (ECU)
2012/13	119	260	31%	13	23	36%	
2013/14	122	282	30%	7	10	41%	28% (IOP/HESA)
2014/15	114	268	30%	9	14	39%	28% (IOP/HESA)
2015/16	112	265	30%	5	12	29%	29% (IOP/HESA)
2016/17	116	235	30%	7	9	44%	29% (IOP/HESA)

Notes: * 2013/14 - 2016/17 Benchmark data are the average of Maths and P&A percentages, for first-year UG only.

Table 6. PAM UG student numbers (all years of study)

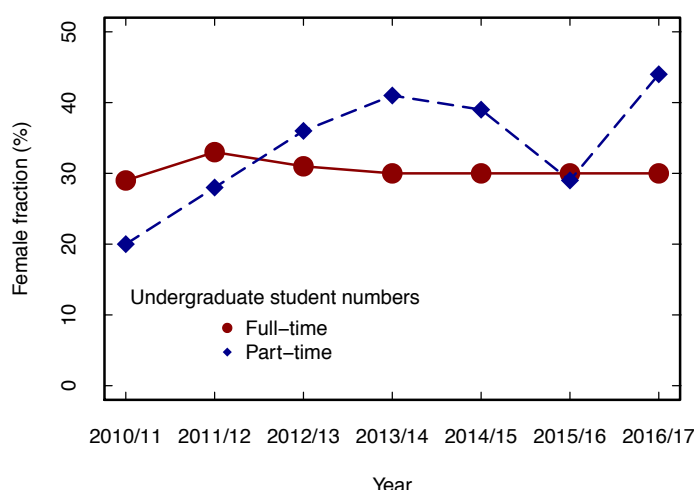


Figure 3. PAM UG student numbers (all years of study) – female fraction

The proportion of women on UG P/T courses has a long-term average of 34%, with substantial year-to-year variation. The majority of such students joined the University on F/T courses, and switched to P/T later as a result of delayed progress. It is therefore a good sign that the percentage of women on the P/T and F/T routes are similar.

Focus groups (**Table 4**) revealed that women UGs want more information and awareness raising of E&D-related issues (**Actions A04 & A05**), support to find development opportunities, and to undertake leadership workshops (**Action A04**).

The percentage of women in the application, offer and acceptance data (**Table 7**) varies by no more than $\pm 2\%$ in any one year, except for 2016/17 when an offer percentage of 33% translated into an acceptance percentage of 42%. The first result provides certainty that the application process serves women equally as well as men. It may be premature to celebrate the above-benchmark female acceptance percentages in 2014/15 and 2016/17 as evidence that the School is now able to attract proportionally more women

into these STEM studies and careers, but it underscores the importance of making the School a welcoming environment where women can (**Table 7**) and do (**Table 8**) succeed in science (**Actions A04 & A06**). **Figures 4-6** illustrate the trends.

Year of Entry	Gender	Applications	Offers	Acceptances	Bench- mark*	Offers/ appl's	Accept's/ offers	Accept's/ appl's
2010/11	F	185	125	28		68%	22%	15%
	M	428	296	59		69%	20%	14%
	F %	30%	30%	32%				
2011/12	F	272	220	61		81%	28%	22%
	M	591	430	118		73%	27%	20%
	F %	32%	34%	34%	34%			
2012/13	F	278	220	35		79%	16%	13%
	M	698	511	102		73%	20%	15%
	F %	28%	30%	26%				
2013/14	F	235	190	40		81%	21%	17%
	M	557	445	95		80%	21%	17%
	F %	30%	30%	30%	28%			
2014/15	F	249	209	50		84%	24%	20%
	M	534	444	97		83%	22%	18%
	F %	32%	32%	34%	28%			
2015/16	F	221	178	42		81%	24%	19%
	M	521	418	114		80%	27%	22%
	F %	30%	30%	27%	29%			
2016/17	F	248	221	56		89%	25%	23%
	M	530	449	79		85%	18%	15%
	F %	32%	33%	42%	29%			
Notes: * 2013/14 - 2016/17 Benchmark data (IOP/HESA) are the average of Maths and P&A percentages.								

Table 7. UG application, offer and acceptance data, by year of entry and gender.

UG degree classification data (**Table 8**) shows considerable year-to-year fluctuation due to the small numbers of students involved. The averages for 2010/11-2013/14 indicate essentially identical classification profiles for women and men at 1st and 2:1, with differences of only a few percent in the lowest classifications. The average for 2014/15-2016/17 also shows very similar profiles for women and men, indicating that women succeed in their studies equally well as men, and in line with the ECU benchmarks. A disaggregation of the data into the Maths and P&A programmes separately (not tabulated here) shows that the equality of male and female “good degree” outcomes is maintained within each programme.

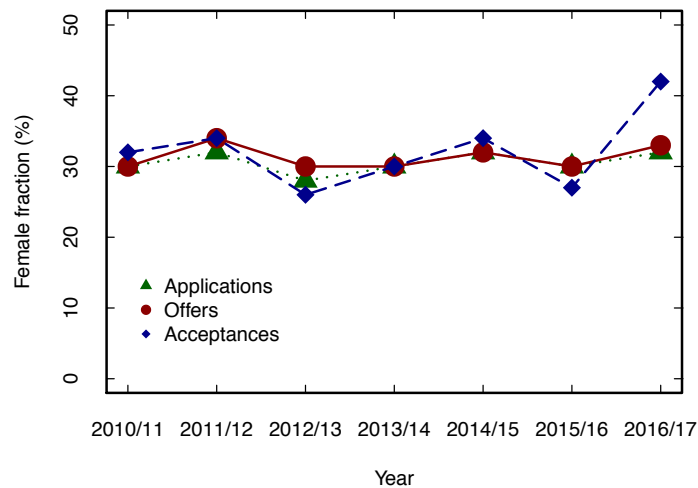


Figure 4. Female fraction of UG applications, offers and acceptances 2010/11-2016/17

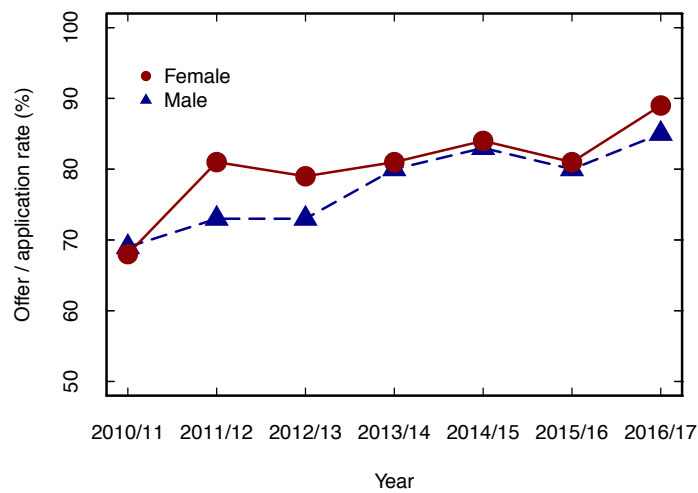


Figure 5. Offer-to-application rate by gender 2010/11-2016/17

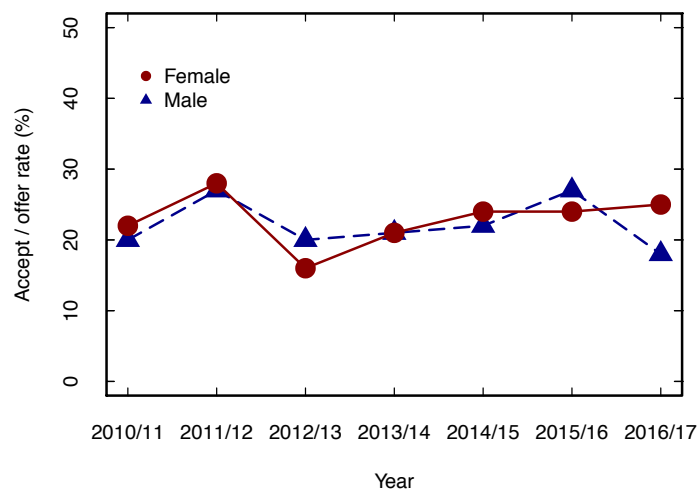


Figure 6. Acceptance-to-offer rate by gender 2010/11-2016/17

Year	Gender	1 st	2:1	2:2	3 rd	Pass/non-hons	1 st +2:1 “good” Benchmark*
2010/11	F	2 (17%)	6 (50%)	1 (8%)	1 (8%)	2 (17%)	
	M	12 (32%)	16 (43%)	7 (19%)	2 (5%)	0	
2011/12	F	5 (25%)	9 (45%)	4 (20%)	1 (5%)	1 (5%)	
	M	24 (39%)	20 (33%)	15 (25%)	0	2 (3%)	
2012/13	F	16 (43%)	11(30%)	5 (14%)	3 (8%)	2 (5%)	
	M	21 (40%)	19 (37%)	6 (12%)	4 (8%)	2 (4%)	
2013/14	F	18 (54%)	10 (30%)	3 (9%)	2 (6%)	0	
	M	32 (43%)	24 (32%)	13 (18%)	4 (5%)	3 (4%)	
2010/11-2013/14	F	41 (39%)	36 (35%)	13 (13%)	7 (7%)	5 (5%)	
	M	89 (39%)	79 (35%)	41 (18%)	10 (4%)	7 (3%)	
2014/15	F	12 (35%)	9 (26%)	9 (26%)	2 (6%)	2 (6%)	
	M	20 (29%)	24 (35%)	14 (21%)	7 (10%)	3 (4%)	
2015/16	F	16 (48%)	8 (24%)	4 (12%)	2 (6%)	3 (9%)	77% (ECU)
	M	24 (36%)	25 (37%)	10 (15%)	1 (1%)	7 (10%)	73% (ECU)
2016/17	F	6 (21%)	11 (38%)	10 (35%)	1 (3%)	1 (3%)	
	M	23 (38%)	18 (30%)	11 (18%)	5 (8%)	4 (7%)	
2014/15-2016/17	F	34 (36%)	28 (29%)	23 (24%)	5 (5%)	6 (6%)	
	M	67 (34%)	67 (34%)	35 (18%)	13 (7%)	14 (7%)	

Notes: * ECU Benchmark data are averages for Maths and Physics (which are very similar)

Table 8. UG degree classifications by year of completion and gender. Multi-year averages are also provided for 2010/11-2013/14 and 2014/15-2016/17. Figures 7 & 8 summarize the degree classification breakdown by gender

We have also looked at failure rates by ethnicity, finding module (not entire degree!) failure rates 15% for “White” students, 24% for “Asian” students, 22% for “Black” students and 9% for “Chinese”. These differences are not merely statistical ($\pm 4\%$). The School is participating in a University project to understand and overcome factors that influence lower success rates for some BME students (**Action A07**).

It is pleasing to note that the equality of opportunity and success seen in the application and degree classification results in **Tables 7 and 8** has been maintained for the seven years over which we have now tracked recruitment by gender on a systematic basis.

Action A07: Participate in University’s BME Success Project to understand and overcome factors that influence lower success rates for some BME students.

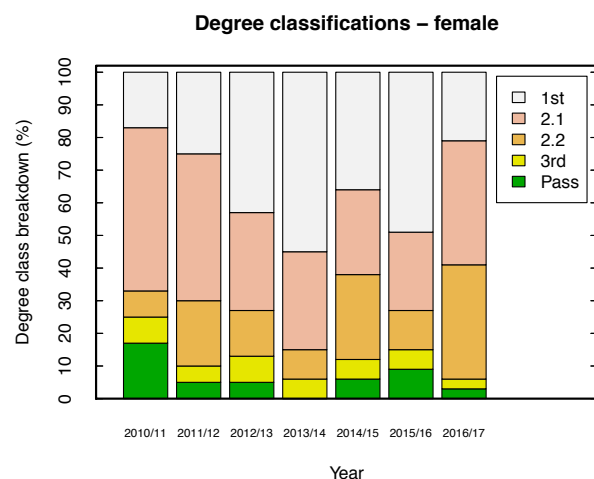


Figure 7. UG degree classifications by year of completion – females

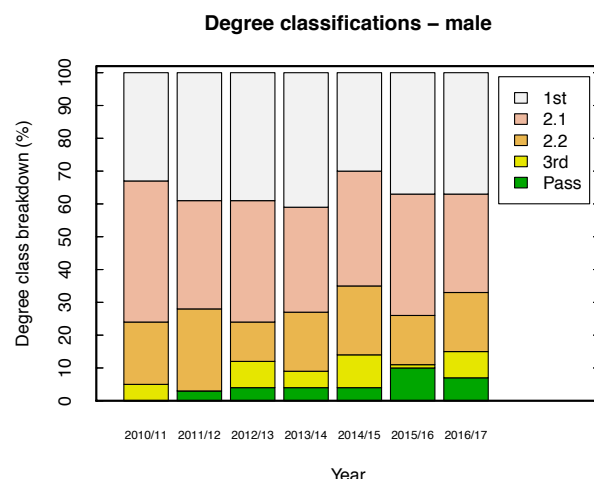


Figure 8. UG degree classifications by year of completion - males

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

N/A – we have no PGT degrees

(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.

The number of PGR places offered is governed by external funding sources, and are almost exclusively PhDs in astrophysics. Women make up 28% of applicants (**Table 9**; 2014/15-2017/18), which compares favourably with the national benchmark for astrophysics PhD students (26%). Offers to women applicants are slightly lower – 23% for 2014/15-2017/18 – but the statistical uncertainty for just 10 offers is $\pm 7\%$ points, i.e. the difference between 28% and 23% is not significant. There is a hint that the acceptance-to-offer percentage may also be lower for women, resulting in only 20% of the 2014/15-2016/17 intake being women, but this too is based on only a few students - 8 women - so the difference between 20% and the 26% benchmark is also not statistically significant.

It does however serve as a reminder that we must continue to ensure that senior women are included in the PGR interview panels. Recent applicants have commented that it is a very friendly School, and we will continue to work to ensure that women interviewed for PGR places find the School to be an attractive one in which to embark upon research careers (**Action A08**). This goal may be assisted by promoting flexible working for PhD students whose partners are located elsewhere in the UK; flexible working can be as important for PGR students as for staff.

Quote: “Having a female on the panel was a really good idea and gave me a warmer, friendlier/ good impression.” (Current PGR student, 2018)

Year of Entry	Gender	Appl's	Offers	Accept's	Bench-mark*	Offers/ Appl's	Accept's/ offers	Accept's/ app's
2010/11	F	28	3	3		11%	100%	11%
	M	86	14	14		16%	100	16%
	F %	25%	18%	18%				
2011/12	F	2	1	1		50%	100	50%
	M	8	7	7		88%	100	88%
	F %	20%	13%	13%				
2012/13	F	13	6	5		46%	83	38%
	M	34	13	11		38%	85	32%
	F %	28%	32%	31%				
2013/14	F	15	2+	2		n/avail	n/avail	13%
	M	29	8+	8		n/avail	n/avail	28%
	F %	34%	20%	20%	26%			
2014/15	F	12	3+	3		n/avail	n/avail	
	M	18	8+	8		n/avail	n/avail	
	F %	40%	27%	27%	23%			
2015/16	F	8	1	1		13%	100%	13%
	M	31	9	9		29%	100%	29%
	F %	21%	10%	10%	26%			
2016/17	F	7	2	2		29%	100%	29%
	M	25	12	12		48%	100%	48%
	F %	22%	14%	14%	30%			
2017/18 (astro only)	F	10	4	2		40%	50%	20%
	M	20	5	3		25%	60%	15%
	F %	33%	44%	40%				
2014/15- 2017/18	F	37	10+	8		28%	71%	20%
	M	94	34+	32		34%	92%	32%
	F %	28%	23%	20%	26%			

Notes: * Benchmark data are for astrophysics PhDs only (IOP/HESA) since this discipline dominates our PGR cohorts.

Table 9. Application, offer and acceptance data for PGR students, by gender. A multi-year average is also provided for 2014/15-2016/17.

Action A08: Ensure that the School environment is one in which women interviewed for PGR places will wish to join as they embark upon their research careers as PGR students.

A split of the PGR figures between F/T and P/T modes of study (**Table 10**) indicates a slightly lower percentage of women on the P/T mode compared to F/T. This is due to a particular, and positive, demographic group: the existence of several recently-retired, male scientists and engineers who have enrolled on self-funded P/T MSc and PhD studies. The presence of these individuals boosts the percentage of male PGR P/T students relative to other categories, and correspondingly decreases the female P/T fraction. They are a positive influence within the School, bringing diversity of age and

experience to the predominantly young PGR cohort. Over the last four years, the cohort female percentage has fluctuated above and below the benchmark.

PGR completion rates match the acceptance rate. While year-to-year numbers are small and fluctuate, the three-year average (2014/15-2016/17) indicates women account for 23% of completions (**Table 11**), while the acceptance rate for 2010/11-2017/18 (when most of these graduates commenced their degrees) was 22% (**Table 9**). We are confident that women and men are equally successful in completing PGR degrees, evidencing the effectiveness of the induction, training, supervision and monitoring arrangements for PGR students.

Year	Full-time			Part-time			Benchmark*
	F	M	F%	F	M	F%	F%
2010/11							
2011/12	8	29	22%	0	4	0%	
2012/13	10	30	25%	2	7	22%	
2013/14	5	19	21%	2	7	22%	26%
2014/15	8	19	30%	1	5	17%	23%
2015/16	7	18	28%	2	6	25%	26%
2016/17	4	19	17%	0	8	0%	30%
2014/15-2016/17	19	56	25%	3	19	14%	26%
Notes: * Benchmark data are for astrophysics PhDs only (IOP/HESA) since this discipline dominates our PGR cohorts.							

Table 10. Annual PGR snapshot, by gender and F/T vs P/T mode of study.

Year of completion	Female awards	Male awards	Female %	Benchmark ECU
2010/11	1	7	13%	
2011/12	4	9	31%	34%
2012/13	4	10	29%	
2013/14	3	8	27%	
2014/15	1	9	10%	
2015/16	3	7	30%	
2016/17	3	8	27%	
2014/15-2016/17	7	24	23%	

Table 11. Annual PGR completions, by gender

(v) Progression pipeline between undergraduate and postgraduate student levels

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

We do not have a postgraduate programme in mathematics, and most of the physics PGR students are in astrophysics. The PGR applicant data (**Table 9**) show that women

make up 28% of applicants (2014/15-2017/18). As women make up 26% of the national UG astrophysics population (IOP/HEA benchmark, 2014/15-2017/18), this indicates a good progression between UG and PGR degrees.

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.

The University's grading scales are set out in **Table 12**, and the distribution of staff across grades in **Table 13**. The bunching of women at UH8 (Senior Lecturer and Senior Research Fellow), which was identified in the Bronze submission, prompted discussions with women at that career stage to plan their progression to UH9 (Reader and Principal Lecturer).

Post-Bronze-Award Impact: The first promotion to Reader from this group of women has now taken place, and further submissions are expected as individuals gain experience in roles that will assist their promotional cases.

Grade	Academic Posts	Research Posts	Professional & Technical
Academic Manager (AM)	Academic managers e.g. Dean of School	Professor	
UH9	Associate Professor Principal Lecturer	Reader	
UH8	Senior Lecturer	Senior Research Fellow	School Administration Manager
UH7	Lecturer	Research Fellow	
UH6			Principal Technical Officer Senior School Administrator
UH5		Research Assistant	Senior Technical Officer Student Administrator School Administrator
UH4			Administrative Assistant

Table 12. UH pay and grading scheme for salaried staff. Only grade points currently in use in the School are shown.

The staffing profile (**Table 13**) is largely reflective of the national picture of physics-dominated departments: a low proportion of women in senior roles (7%, against a 12% benchmark), and a higher proportion of women at earlier career stages that fluctuates as external grants start and end (currently 25%, against a benchmark of 18%).

		Sept2012		Sept2013		Sept2014		Sept2015		Sep2016		Sep2017		F% Benchmark*
Grade		F	M	F	M	F	M	F	M	F	M	F	M	2016/17
Academic Manager (Prof/ Dean/ Assoc Dean)	Professor	1	7	1	9	1	10	1	10	1	12	1	11	
	Non-Prof		2		2		2		2		2		2	
	F%	10%		8%		8%		8%		7%		7%		12% (IOP/HESA)
UH9 (PL/Reader)		1	13	0	12	0	11	0	9(a) 1(r)	0	7(a) 1(r)	1(a)	8(a) 1(r)	
UH8 (SL/SRF)		4	6	6	8	5	7	4(a) 1(r)	6(a) 3(r)	4(a) 1(r)	9(a) 3(r)	4(a) 1(r)	12(a) 3(r)	
UH7 (L/RF)		6	13	2	13	2	13	2(a) 0®	4(a) 12(r)	2(a) 3(r)	4(a) 9(r)	1(a) 4(r)	4(a) 12(r)	
UH6 (RF)		3	5	3	7	1	6	0(a) 1(r)	1(a) 3(r)	2(r)	2(a) 1(r)	3(r)	1(a)	
UH4,5 (RA)		-	-	-	-	0	1	1(r)	0	0	1(r)	0	1(r)	
F%		27%		22%		17%		19%		24%		25%		18% (IOP/HESA)
TOTALS		15	46	12	51	9	50	10	51	13	51	15 (21%)	55	
Notes: * Staffing is dominated by physics, so we use the IOP/HESA physics benchmarks for 2016/17														

Table 13. School academic and research staff by grade (a=academic, r=research) and gender

The ESS revealed that 87% of staff feel “there are strong female role models within the School” (no difference between men and women). Nevertheless, 88% of female staff and 69% of male staff feel there are “not enough women in senior roles within the School”. Two actions emerge from this: (1) ensuring that women are attracted and recruited (**Action A09**), and (2) that they are retained and promoted. It is therefore important that the School continues its work to ensure that promotion criteria are widely understood and that staff are encouraged to plan their progression to higher grades (**Action A10**).

Action A09: Encourage more women (and other underrepresented groups) to take up posts in the School.

Promote UH and School family-friendly policies, ensure there are at least two* women on interview panels, and ensure that interview panels are also diverse in other respects (age, ethnicity), to encourage women to apply for and, if offered, take up posts in the School.

*(*if necessary, ‘borrowing’ female scientists or engineers from other Schools, to avoid ‘overburdening’ PAM female staff)*

Action A10: Ensure that promotions criteria, which are already on the University intranet site and the School wiki, are understood by all staff and that staff are encouraged to plan their progression to higher grades.

SILVER APPLICATIONS ONLY

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

The School has a small complement of physics technical staff (3: 1F, 2M). The technical roles are not intended to progress to academic roles, but promotions within the P&T scale are encouraged (see Section 5.1).

Post-Bronze-Award Impact: Since the Bronze submission, one member of technical staff (M) has been promoted, and a second case (F) is currently under review.

(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.

No academic, research or professional and support staff hold zero-hours contracts. Zero-hours “Casual” contracts are used only for a team of outreach assistants, mostly current students, who are invited to sign up for outreach events depending on demand.

Staff numbers split across permanent vs fixed-term contracts, by gender, are presented in **Table 14**. We include Professional and Support Staff as separate entries, since we track equality issues across all staff groups. Fixed-term contracts are most common in the earliest academic and research career grades (UH4-UH7), covering staff on externally-funded research contracts which are fixed-term, or experienced senior staff who have previously retired and who have subsequently returned to work on particular projects on a fixed-term basis.

Post-Bronze-Award Impact: Most of the initial growth in staff numbers takes place in the early UH4-UH7 grades, and it is encouraging to see the steady influx of new women staff in these roles over the last three years, from 4 in 2014/15 to 7 in 2015/16 and 8 in 2016/17. This does of course create the need for career support and progression beyond these entry points, which we address below.

Year	Grade (see Table 12)	Permanent			Fixed Term			F% Perm+Fixed	F% Benchmark*
		F	M	F%	F	M	F%		
2014/15	UH8-AM acad.&res.	6	28	18%	-	3	0%		
	UH4-UH7 acad.&res.	2	6	25%	2	14	13%		
	<i>Total acad.&res.</i>	8	34	19%	2	17	11%	16%	
	PSS	5	2		-	1			
2015/16	UH8-AM acad.&res.	6	28	18%	-	6	0%		
	UH4-UH7 acad.&res.	1	5	17%	6	12	33%		
	<i>Total acad.&res.</i>	7	33	18%	6	18	25%	20%	
	PSS	5	1		1	1			
2016/17	UH8-AM acad.&res.	7	33	18%	-	4	0%		
	UH4-UH7 acad.&res.	-	7	0%	8	11	42%		
	<i>Total acad.&res.</i>	7	40	15%	8	15	35%	21%	18%
	PSS	5	2		1				
Notes: * Staffing is dominated by physics, so we use the IOP/HESA physics “all academic staff” benchmark for 2016/17									

Table 14. Permanent vs Fixed-term contract types, by staff grade and gender

Individual members of staff tend to move up the grades and from fixed-term to permanent over time. However, in the ESS, 58% of respondents (58%F, 58%M) indicated that they think it takes longer to progress if you work part-time or flexibly. This is much larger than the percentage of staff actually working part-time or having formal flexible working arrangements, so indicates a perception that doing so would delay career progression. In a research-active School, where REF and research promotional criteria include whether an individual’s research is nationally or internationally recognised, there is inevitably pressure for staff to remain engaged in research, and this national academic research culture almost undoubtedly plays a significant role in staff perceptions. There is therefore a need for the School to understand and counteract this perception (**Action A11**).

Action A11: Understand the basis of perceptions that part-time and flexible working delay career progression, staff experience of induction (see below), and act to ensure that part-time and flexible working options are promoted to staff and potential applicants.

(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.

Between 2014/15 and 2016/17, 15 members of staff left PAM (**Table 15**). Four of these were senior staff (UH8-AM) who retired – all men. The other 11 (10M, 1F) were all early career scientists (UH4-UH7), ten of whom (M) were on fixed-term project funding, and the eleventh (F) was on a permanent contract tied to a longer-running project that nevertheless reached the end of its funding. Data on leavers, including reasons for leaving, are collected by HR. Of the 15 leavers, two were women (13%), indicating that women are not over-represented in staff turnover.

Year	Grade (see Table 12)	Permanent			Fixed Term			Typical reason for leaving
		F	M	F%	F	M	F%	
2014/15	UH8-AM	-	1	0%	-	1	0%	retirement
	UH4-UH7	-	-	-	1	5	20%	end of project
2015/16	UH8-AM	-	2	0%	-	-	-	retirement
	UH4-UH7	1	-	100%	-	2	0%	end of project
2016/17	UH8-AM	-	-	-	-	-	-	
	UH4-UH7	-	-	-	-	3	0%	end of project

Table 15. Leavers by contract types, staff grade and gender

1927 words

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.

Whenever possible, the School advertises that F/T jobs could be offered on a less-than-full-time basis, to encourage applicants (e.g. those with caring responsibilities) who might be looking for <1.0 FTE. This has been effective in identifying suitable applicants who would not have applied for a 1 FTE post, and one academic member (F) of the EC took up such a post.

The importance of gender-neutral wording in recruitment activity was a particular discussion topic at the School's 2016 Staff Development Day. Partly as a result of the awareness this raised, ...

Post-Bronze-Award Impact: ... the EC Chair is now routinely consulted on the wording of job advertisements before they are placed, to ensure the language is gender-neutral. The EC Chair also monitors the gender profile of application and shortlist data, though this task will be taken over by another EC member from 2018/19.

PAM follows University interview procedures, ensuring that panels include at least one person of each gender, and in many cases two. Nevertheless, discussions at a 2017 Women in PAM Network Lunch (**Table 4**) revealed that female staff may still feel outnumbered on interview panels and this can leave them with a weaker voice. Consequently, the School will switch to more balanced recruitment panels, even if it means 'borrowing' a female staff member from another School (as we have done before) (**Action A12**).

Action A12: From 2018/19, increase the proportion of females (at least two women) on staff and PGR recruitment interview panels. Retrospectively adjust the workload of staff undertaking this work. Appoint EC member to continue to monitor gender split of applications and shortlisting.

Recruitment & Selection training is currently required for all panel *Chairs*, and most panel *members* have also undertaken this training. Sitting alongside the requirement that all PAM staff have undertaken E&D and Unconscious Bias training, the School is well positioned to remove the shadow of gender imbalances from recruitment activity.

Post-Bronze-Award Impact: We have been successful in recruiting two couples in recent years and have made similar offers to other couples, demonstrating that academic excellence and gender diversity can be achieved simultaneously, and also that recruitment exercises can be sensitive to the logistic challenges faced by academic couples.

(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.

New staff participate in a University-wide induction programme that includes mandatory E&D training (**Table 16**), as well as meeting regularly with their line manager to review their settling in. Three meetings are formally recorded during the probationary period (1 year), but normally many more take place to ensure the staff member is finding his/her way in their new job.

Mandatory for all new PAM staff (taken as part of Induction)	E&D-related <i>optional</i> training
Diversity in the Workplace (online)	Cultural Awareness
Equality and Diversity Essentials	Disability Awareness
Unconscious Bias (mandatory in PAM)	Dignity and Respect: Dealing with Bullying and Harassment
Data Protection	Transgender Awareness
Central Induction	Leadership and Management
Health and Safety (online)	Personal Skills

Table 16. Induction courses

Additionally ...

Post-Bronze-Award Impact: ... a PAM-specific Survival Guide for new staff, and a more extensive “all-you-need-to-know” are now provided (**Figure 9**) in the staff online handbook (wiki) to which all new staff are directed.

The ESS found that 88% of women felt the induction into their role was adequate and the remaining 12% said “not sure”. This very positive view was not held by all men, though, with only 60% stating it was adequate, 12% not sure, and 28% stating it was not adequate. Most of the women in the School have been appointed within the last 10 years when better induction processes have been in place, whereas many of the men were recruited when induction was less well-organised, but we will explore this idea in a staff focus group (**Action A11**).

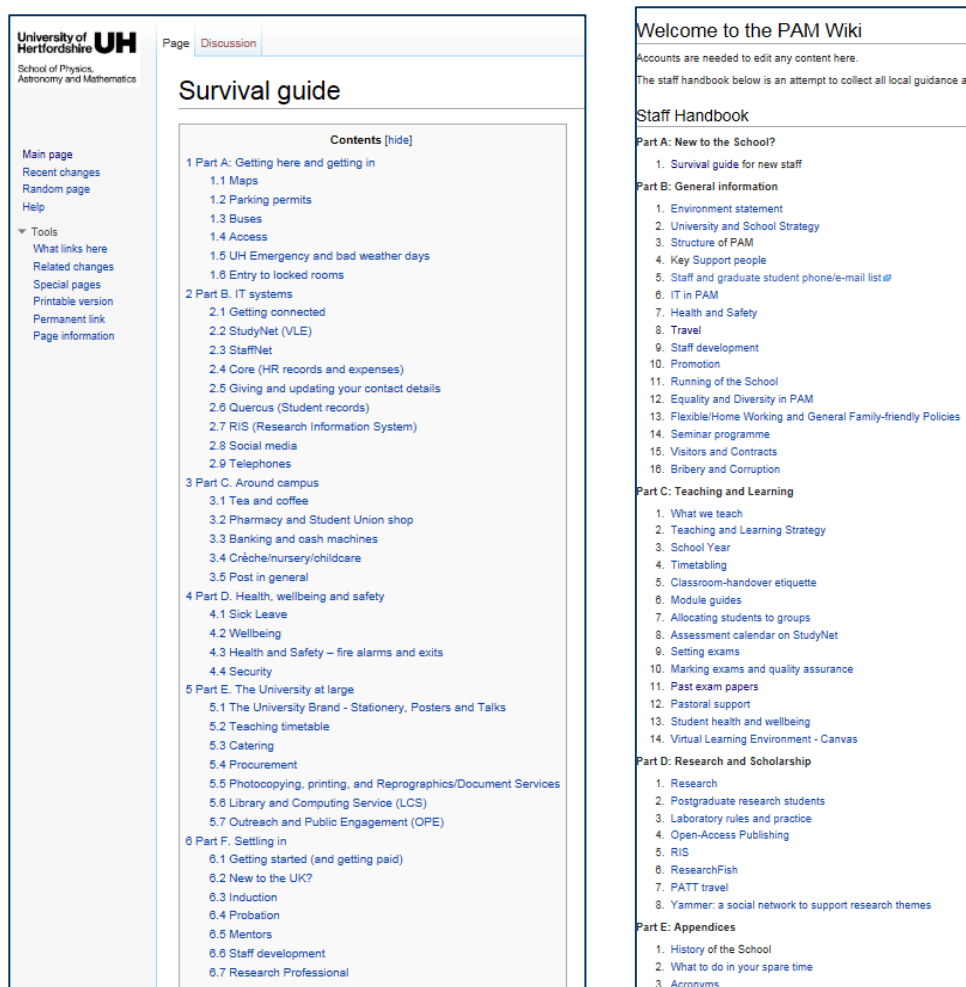


Figure 9. (left) Induction Survival Guide for new staff, and (right) all-you-need-to-know, forming key sections of the School handbook (PAM Wiki)

(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.

The University promotions process requires staff seeking promotion to submit a case following discussions with their Dean of School. The University's promotions scheme is "always open", rather than having a single annual submission window. The Dean will assist a member of staff in preparing a case, and this will sometimes include recommending that a case is developed further prior to submission. Central promotion data are therefore for those cases that *are* formally submitted, and the success rate after formal submission is essentially 100% since it is the Dean's role to ensure that any cases that are unlikely to succeed are developed further until they are ready. The School is changing its internal practice to ensure all eligible staff discuss annually whether their case for promotion is strong enough to submit (**Action A13**).

Over the three years 2014/15-2016/17, women accounted for 14% of the promotions (**Table 17**), and both P/T and F/T staff were promoted. This is slightly below the overall percentage of staff who are women (**Table 14**), but with the small numbers involved (3 female promotions over three years), the statistical uncertainty is large ($\pm 8\%$). One of

the reasons commonly proposed for the “leaky pipeline” in physics is that women might be more reserved about putting their cases forward, so having a promotion rate for women that may be slightly low is a reminder that the School needs to continue its efforts to ensure that women are encouraged to develop and submit their promotional cases (**Actions A09, A12**).

Year	Grade pre-promotion	F		M		Total
		F/T	P/T	F/T	P/T	
2014/15	UH8-AM	-	-	1	-	1
	UH4-UH7	-	-	3	-	3
2015/16	UH8-AM	-	-	2	1	3
	UH4-UH7	1	-	7	-	8
2016/17	UH8-AM	1	-	3	-	4
	UH4-UH7	-	1	2	-	3
2014/15- 2016/17	all	2	1	17	1	22
		14%		86%		

Table 17. Promotions by pre-promotion grade, gender and FT/PT status

The ESS revealed that 35% of men and 25% of women disagree that they “understand the promotions process and criteria”, and only 40% of women and 58% of men “think the process is transparent and fair”. Many of the successful promotions cases have been initiated as a result of encouragement by line managers in appraisals and by other senior managers, so the responses above indicate the need to be more systematic about ensuring that all eligible staff are aware of promotional criteria and are regularly encouraged to plan for promotion (**Actions A10, A13**).

Asked about their perceptions of support for promotion, 25% of women and 20% of men disagreed with the statement that they “received support and encouragement from my department to apply for promotion or internal jobs”. Reasons stated for not going for promotion included:

- “I don’t think I’d be successful” (20%F, 36%M)
- “Lack of support” (0%F, 29%M)
- “I don’t want to” (0%F, 36%M)
- Other reasons, such as “not ready”, “there isn’t promotion as far as I’m aware”.

These responses emphasise the need to clarify men’s and women’s perceptions of what gaining promotion entails and what support is available to undertake it.

Action A13: Raise awareness of different pathways available of how to develop one’s career to work towards promotion. The School will run a promotions awareness session, and consider whether to institute an annual promotion readiness review to encourage and offer practical support to people who might be reluctant to put themselves forward for promotion.

(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.

The 2014 REF figures (**Table 18**) indicate that all eligible female academic staff were submitted. Not all men were, because a number of academic staff were no longer research active, or were research active in areas that did not possess the critical mass needed to sustain a REF grouping.

	Eligible staff			REF2021 criteria			submitted		
	F	M	Total	F	M	Total	F	M	Total
RAE2008*							6	24	30
REF2014	8	40	48	8	31	39	8	27	35
REF2021**	7	40	47	7	35	42	7	35	42
Notes: * We no longer hold sufficiently detailed staffing profiles for 2008 to assess the numbers of 2008 RAE-eligible staff, but the strategy at the time was to submit most/all research-active staff. ** Projected figures only for 2021									

Table 18. RAE and REF submission data by gender

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.

(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.

- (i) The induction support for Professional and Support Staff (PSS) is identical to that available for academic/research staff, set out above (Section 5.1.ii). They are also included in all University and School E&D and Staff Surveys, and participate in Women in PAM activities.
- (ii) Promotion processes for PSS staff follow a widely-adopted (national) process called Evaluate (formerly Equate), which can be initiated at any time by the staff

member or his/her line manager, supported by the School's HR business partner (member of the EC). The Evaluate process involves scoring a number of role and responsibility descriptors against a staff member's job description. The process seeks to achieve a largely objective mapping of criteria, rather than requiring value assessments as in academic promotional cases, and this serves to reduce the risk of gender-influenced outcomes.

Over the last five years, the School has successfully promoted one (M) PSS (included in **Table 17**), and has elevated another through the bar. The School is currently evaluating two others (1F:1M).

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 runs an extensive staff development programme with numerous courses, including directly work-related (e.g. health and safety) and indirectly work-related (e.g. retirement) topics. Most are free-of-charge; the exception is some courses run by external specialists such as Radiation Protection Advisor training, which Schools must pay for, so there is no disincentive to participation. All staff are emailed monthly about forthcoming opportunities, and they can sign themselves onto most courses via their personal HR webpage. This also means their participation is visible to their line manager for discussion in appraisals and enables them to plan training in an informed way.

In-house training course categories taken by PAM staff in 2014/15-2016/17, and external events attended, are provided in **Table 19**. For the former, the "Course category" covers a number of individual courses; for example, the "E&D" category includes courses covering "Cultural Awareness", "Dignity and Respect: Dealing with Bullying and Harassment", and "Transgender Awareness Workshop", amongst others.

The figures show that internal training uptake amongst women is high, accounting for 37% of sessions over the last three years. The major course categories, i.e. with more than 50 sessions booked, are: Academic Practice, E&D, and Research Practice, and these have female uptake of 25%, 33% and 20% respectively. External events overshadow internal events, with women participating in 174 events (27%) over the last three years. These figures show that women are successfully engaging with training opportunities. The E&D course figures show an uptake of 63% by male staff, confirming that E&D matters are viewed as School-wide responsibilities, not a women-only issue.

Course category	Staff sessions booked								
	2014/15		2015/16		2016/17		2014/15-2016/17		
	F	M	F	M	F	M	F	M	F%
About UH	2	7	6	3	4	10	12	23	34%
Academic Practice	4	9	6	13	4	19	14	41	25%
Business & Enterprise					0	5	0	5	0%
UH Conferences	1	3	11	17	0	0	12	20	38%
Equality & Diversity	18	49	6	5	7	9	31	63	33%
Health, Safety and Wellbeing	7	7	8	4	4	8	19	19	50%
IT Systems and Applications	7	0	5	1	2	0	14	1	93%
Leadership and Management	5	0	6	2	7	3	18	5	78%
Personal Skills	1	1	1	0	2	1	4	2	67%
Professional & Administrative practice	4	3	1	0	2	2	7	5	58%
Research practice	2	21	5	27	12	28	19	76	20%
Total UH	51	100	55	72	44	85	150	257	37%
External events*	54	81	62	222	58	174	174	477	27%
Notes: * "External events" records instances of external travel, which covers trips of one or more days duration for events that may include conferences, workshops, seminars, field work and networking									

Table 19. Take-up of in-house UH training courses and external events by gender

Having appointed a significantly larger number of women researchers (**Table 1**), the School must also now support their development and retention for the future (**Action A14**). The University's commitment to its researchers is recognised by its European Commission "HR Excellence in Research Award". University "Researcher Development Programme" (RDP) has been mapped against Vitae's "Researcher Development Framework" (RDF), with (2017/18) 67 courses for students and early-career researchers covering all subdomains of the RDF, and are bookable via the University intranet (StaffNet). Courses run at different times on different days to maximise attendance opportunities.

Action A14: Ensure that female (and male) researchers are supported in their career development through a wide range of professional (RDF) and E&D (Juno/AS) activities.

(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's annual appraisal system involves staff meeting with their line managers once per year for a planning exercise and six months later for a review. However, the

appraisal system has historically not been widely valued by staff, and it came as no surprise that the ESS revealed 45% of men and 33% of women hadn't had an appraisal in the past year. The typical reason was that they were invited but didn't settle on a date and were not "chased" to do so. The survey also recorded that only 33% of staff (the same for men and women) believe that "career development processes in the School are clear and transparent". However, for those who reported that an appraisal did take place, 83% of women and 54% of men indicated that "career progression is always usefully discussed". In summary, appraisals are valuable for career progression when they take place, but generally neither staff nor managers prioritise them over other activities, particularly since most staff are in regular contact with their line managers. PAM is a small School, and many developmental issues can be (and are) discussed outside the appraisal round.

Making the appraisal and promotions process more effective was an integral part of our Bronze action plan, and in response to the continuing struggle to see it valued, the Dean led an overhaul of the appraisal process in 2017. Alongside this, further information on the promotion process has been included in the online Staff Handbook (wiki). The changes will be reviewed by SEG annually, and at the time of the next Equality Survey (2019) (**Action A15**).

Action A15: Review effectiveness of the revised appraisal system through SEG (annually from autumn 2018) and the PAM Equality Survey (biennial: 2019, 2021).

(iii) Support given to academic staff for career progression

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

The extensive in-house training programme sees high levels of engagement by staff (open to all) (**Table 19**). Staff can book themselves onto most of these, often as a result of discussions with their line manager which may have taken place in an appraisal or in other non-appraisal discussions. In-house training and career support is complemented by external workshops and conferences, which staff attend regularly. These range from workshops across academic, professional and research topics run by the main professional bodies (Royal Astronomical Society, Institute of Physics, Institute of Mathematics and its Applications, and London Mathematical Society) in the UK, to major international conferences. Postdoctoral researchers and early PGRs are also encouraged to attend training courses within the University's Researcher Development Programme (RDP). We have not yet monitored postdoctoral researchers' take-up of this programme, and will do so to establish its utilisation and effectiveness (**Action A16**).

Action A16: Evaluate and maximise usefulness of the Researcher Development Framework (RDF) to postdocs (specifically).

PAM has also participated in the Aurora programme, and obtained development places for two mid-career women academics. Others will be supported to apply for the scheme in future years.

In the past, the School assigned mentors (separate from line managers) to all new members of staff to assist their transition into the workplace over the first few months (see **Case Study 2**). But in recent years, line managers have principally taken on this role. In the ESS, 17% of men and 50% of women reported having a mentor (**Table 20**) - the larger fraction of women is a reflection of the increase in appointments of women in recent years (**Table 1**). Of those who do not have a mentor, most female staff would like one, and most male staff prefer not to. This result may also be skewed by recent appointments of more women. Discussions in the Women in PAM forum suggest that the desire for mentoring is stronger amongst postdoctoral researchers, but that PGR students and some male staff also see this as valuable (**Action A17**).

Mentoring response	Female	Male
I have a mentor	50%	17%
I don't have a mentor and want one	33%	17%
I don't have a mentor and don't want one	17%	66%
Total	≅100%	≅100%

Table 20. Mentoring views from spring 2017 PAM Equality Survey

Action A17: Develop reinvigorated mentorship programme for new staff and PGR students (also open to existing staff).

We return to career progression in the review of committees in Section 5.6(iii).

(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).

Students are both encouraged and required to engage with career planning from the outset of their degree. Activities include senior academic leadership of career planning activities in the curriculum, the development of individual student links with School-specific careers advisors and employer-engagement professionals in the University's Careers and Employment Service, and the employment of a dedicated Employer Engagement Officer by the School associated with our membership of the South East Physics Network (SEPnet). Specific examples of these activities include:

- All 2nd year students take a module (*Graduate Skills*), which includes a range of workshops and seminars on career choices, career planning, CV and cover letter writing, online professional media and professional body networks.
- Access to 8-week summer placements arranged and promoted by our SEPnet Employer Engagement Office.
- Careers and Employment Service and our SEPnet Employer Engagement Officer work together to arrange visits by alumni and employers, and to employers' sites, to inform and encourage students in their career planning.

- Students are encouraged to consider including a full-year industrial or research placement in their third year of study. Women UGs are well-represented in the take-up of placements (**Table 21**) relative to the overall female percentage in the School (30%).

Year	F	M	F%
2014/15	7	7	50%
2015/16	4	6	25%
2016/17	4	1	80%
2017/18	3	0	100%

Table 21. UG placement student numbers

In 2017, a UG focus group revealed a desire to know more about academic career paths, and specifically talks by research staff. An inaugural event co-organised by the student society (PAMSoc) and staff was held in February 2018, comprising a lunch and 6 short research talks given by staff (5M:1F) – see **Figure 10**. It was attended by 45 UGs across all years (approximately 40%F). This was deemed to be a success and will be made part of the annual calendar of activities (Action **A18**).

Action A18: Create opportunities to help UGs learn about PGR opportunities and research in PAM and beyond. Establish an annual UG Research Odyssey in the School calendar, and ensure UG students are informed about and welcomed to other research seminars through the year.

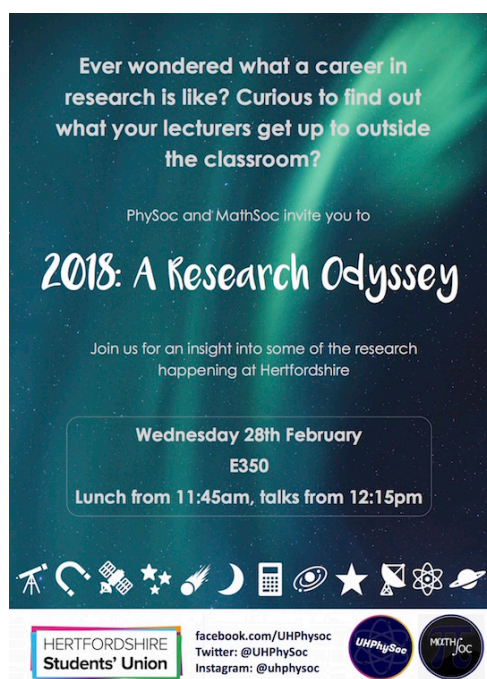


Figure 10. Poster for the UG-organised research event

In recent years, summer research opportunities have sometimes been made available, on an ad hoc basis, to UGs. One UG (F) noted that, “Opportunities are available but must sometimes be sought out; one must have the courage to ask.” As some women might be reluctant to ask or seek out such opportunities, from spring 2017 the process of advertising and appointing UG students to summer research projects was formalised by the PGR Tutor. We will review the success of this measure to see whether the uptake by female UGs is representative of the study body (**Action A19**).

Action A19: Promote and review the gender balance achieved by the new 2018 UG Summer Research project.

Post-Bronze-Award Impact: As part of our Action Plan, we set up a larger programme of Women in PAM events to support and celebrate women in physics, astronomy and mathematics. In 2017, timed to coincide with International Women’s Day (IWD), we held an internal event in which approximately 50 staff and students (M&F) attended informal soapbox-style presentations from female staff about career paths and anecdotes (see **Figure 11**).

Quote: *“It was inspirational to see women scientists from a variety of different disciplines being recognised and celebrated at the [2018] IWD event”* (Female member of academic staff, 2018)



(iv) 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.

Within both the staff training programme (**Table 19**) and RDP (for PGRs and postdocs), there are training courses on research grant writing. The Research Practice (staff) course shows 95 instances of uptake by PAM staff in the last three years (19F, 76M – **Table 19**).

As part of the grant-submission process in the School, an independent reader who is not on the project team is assigned to provide constructive feedback on proposals prior to submission. This not only provides good advice to the grant's authors, but also improves the sense of community within the School by sharing experience and knowledge.

Researchers are also supported by knowledgeable and attentive staff in the University's Research Office, who assist with pre-submission preparations and post-notification advice.

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?

(vi) 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.

(ii) 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.

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?

The training opportunities set out in Section 5.3(i) are equally available to PSS. Extracting just the PSS figures from **Table 19**, we see a good level of engagement (**Table 22**). Not surprisingly, they focus around a different subset of core training needs, notably IT systems and Leadership & Management, as would be expected for staff in these roles. The fact that PSS staff have engaged with a wide range of courses, and that they have also selected a core of courses appropriate to their roles, indicates that the training provision offers both breadth and depth for all staff.

Course category	Staff sessions booked							
	2014/15		2015/16		2016/17		2014/15-2016/17	
	F	M	F	M	F	M	F	M
About UH	-	-	-	-	1	-	1	-
Academic Practice	3	-	3	-	1	-	7	-
Business & Enterprise	-	-	-	-	-	-	-	-
UH Conferences	1	-	-	-	-	-	1	-
Equality & Diversity	6	2	1	-	2	-	9	2
Health, Safety and Wellbeing	-	-	2	1	4	1	6	2
IT Systems and Applications	7	-	3	-	2	-	12	-
Leadership and Management	4	-	6	-	7	-	17	-
Personal Skills	1	-	-	-	2	-	3	-
Professional & Administrative practice	-	-	1	-	-	-	1	-
Research practice	-	-	-	-	1	-	1	-
Total UH	22	2	16	1	20	1	58	4

Table 22. Take-up of in-house UH training courses by gender, for Professional and Support Staff (PSS) only

(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

PSS are covered by the same appraisal structure as academic and research staff. The most notable difference is that PSS tend to be more diligent about undertaking their appraisals; the team of PSS is small – five administrators (all F) and three technicians (1F:2M) – and all have had annual appraisals.

PSS are included in the biennial ESS, and their views are reflected in the feedback on appraisals reported above (Section 5.3(ii)). Because the School is small, we do not separately report responses from yet smaller subgroups of staff, so all staff can be assured of anonymity in their responses. The School Administration Manager is the appraiser and line manager of the other four administrators, and as a member of the SEG she is able to feed the views of PSS into the senior decision-making body of the School and ensure that decisions that affect them are properly considered.

(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

PSS follow the “Evaluate” process in career progression discussed above, with role requirements principally determining the job grading. Support through this process comes from the PSS member’s line manager and from the School’s HRBP (F). Apart from

annual salary progression within a grade, promotion to a higher grade follows the role requirements: either the job grows in complexity or responsibility so that a change in the role requirement is recognised, or the person applies for a vacant higher-graded role (within or outside the University).

PSS have used both approaches successfully in recent years where circumstances were right: one administrator's (F) role was re-Evaluated to a higher grade to recognise changes in the responsibility being exercised; another administrator (F) was promoted "through the bar"; a technician (M) was promoted when a higher-level post became available as a result of another member of staff moving jobs; and one other PSS role (F) has recently been re-Evaluated to check whether re-grading should take place, and with the support of her manager has undertaken activities to develop her career and open opportunities to pursue other job opportunities in future.

It should also be noted that not all staff want to move into roles carrying greater responsibilities or requiring the acquisition and exercise of new skills, and there is not always the opportunity to do so, so there is not an expectation that every PSS member will be promoted, or that it will happen frequently.

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.

Formally advising HR of the intention to go on maternity leave triggers the Occupational Health Department to perform a risk assessment of the employee in tandem with the line manager. This can also initiate a discussion of flexible working options such as an adjustment to work hours or duties, which may often need to be implemented before the leave starts.

Quote: "My line manager (M) went through the pregnancy risk assessment form with me and suggested if I might find it helpful to work flexibly from home on occasion on non-teaching days if I needed a rest. I found this incredibly supportive." – SL (F), 2014

Occupational Health also communicates about breastfeeding facilities available on campus to staff members, and HR sends a maternity package of information with policies and helpful advice, e.g. regarding the on-site nursery.

In 2017 a new Working Parents' Network (WPN) was started, organised and run by the Equality Office. It is available for any parent, expectant parent or grandparent among UH staff to join a network/community for additional social activities and support, and three (2F:1M) PAM staff have joined. As a means of highlighting the availability of additional support and sharing experiences, the WPN is regularly re-advertised by the EC Chair via email and event posters.

Discussions also take place with the Dean (who oversees workload allocations with the School) about planning for leave, the use of Keep in Touch (KIT) days, arrangements for reallocation of teaching and supervisory responsibilities during leave, and what arrangements can be made concerning return to work.

(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 School uses paid KIT days to enable staff who are on maternity leave to maintain contact with their colleagues, collaborators and activities. Examples include: maintaining involvement in their research networks by attending conferences (for which the usual research travel budgets are used), holding supervisory meetings with PhD students and postdocs, and participating on selection panels which will have a bearing on their future work environment. Two members of academic staff (out of 3) who took recent maternity leave planned and used KIT days.

In line with UH policy on travel costs, one senior female academic member of staff was granted permission on a number of occasions to take her small child and researcher husband to conferences. This flexibility was cited as “crucial” as it enables women to get back into research, collaborations and networking.

Quote: “The Deans have always been very supportive with travel requests with accompanying young children, which means I don’t have to say no to invitations that are important for raising my research profile, especially after a prolonged maternity leave”. – SL (F), 2017

Cover for teaching duties has traditionally been arranged from within existing staff. While this helps ensure the quality of teaching provision during the absence, it can create a negative perception that the impact is felt by a small number of “unlucky” colleagues, rather than being shared more widely and imperceptibly. To improve this situation, the School will be pressing the University to adopt, as policy, approval for Schools to appoint temporary teaching and research cover for the duration of maternity leave (**Action A20**).

Action A20: Lobby University-wide SAT to help better support women’s careers through teaching cover and carers’ fund during/after leave. Affirm the principle that maternity and caring absences should be not weaken promotional cases.

(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.

To support staff after their leave, the School operates on a “best effort” basis to meet reasonable requests for adjustments to work patterns (e.g. variation in teaching hours, or a condensed work week to coincide with childcare arrangements), if requested (see section 5.5(vi)).

Upon return to work:

- Two members of academic staff had teaching confined to three days, and a third to four days, to give greater scope for informal flexible working. In all cases an attempt was made to allocate similar teaching duties to those before

the leave began, to avoid the need for new preparation and thus to allow a ramping up of research with minimal loss of momentum.

- Another member of academic staff (UH08) was on maternity leave from another university when she was appointed. Her start date was postponed until she was ready to join. At her request, she was appointed initially to a 0.5 FTE contract for six weeks, to permit a slower ramp-up to full-time, to assist with her transition into work and her child into childcare.

The School operates a transparent workload allocation model which has flexibility for variations in individual duties from one year to the next, and this can be used to taper teaching commitments of staff returning from long-term leave (maternity, paternity, sickness), but the model does not have as a stated principle that such adjustments will be prioritised. The Dean has undertaken to review this with the SEG, and formalise the adjustment that people taking long-term leave can anticipate, to remove uncertainty or any perception that they might have to bargain for the outcome they seek (**Action A21**).

Action A21: Help research-active women's transition back to work from long career breaks via teaching relief (workload tapering).

The University also has an Ofsted rated "good" on-site nursery provision, open from 8am-6pm Monday to Friday which covers the majority of the teaching week (utilised by four members of PAM in the past 6 years).

(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.

Over the past six years, three members of academic staff (all UH8 and on permanent contracts) have taken maternity leave of a full year, and all returned full-time (**Table 23**). Of these, two were still in post 18 months after return from maternity leave, and the third has only just returned to work less than 6 months ago.

Year leave began	Maternity leave		Paternity leave # x grade	Shared parental	Adoption	Male parental leave
	# x grade	Returned and stayed 6/12/18?				
2010/11						
2011/12						
2012/13			1			1
2013/14						
2014/15	1xUH8	Y/Y/Y/Y	1xUH7			
2015/16	1xUH8	Y/Y/Y/Y	1xUH7 1xUH8			
2016/17	1xUH8	Y/new returner	1xUH6 1xUH7			

Table 23. Types of maternity/paternity/adoption leave by gender and grade

(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.

Over the past six years, 6 members of staff have taken formal paternity leave (**Table 23**), including 2 research staff (UH6/7) and 4 academic staff (UH7/8/9), with another member taking parental leave. As the University has generous annual leave allowances, and the School makes extensive use of informal flexible working (see Section 5.5.vi), new fathers will often combine paternity leave with other leave to increase their time off. With established members of staff seen taking paternity leave, men and women are aware that the School encourages staff to take leave associated with new families.

(vi) Flexible working

Provide information on the flexible working arrangements available.

There are three ways of requesting flexible working which differ in timescale and permanence:

- Contractual flexible working request: Staff may formally request flexible working on a long-term basis via a request to HR. This results in an agreed change in contract, which may be permanent or for a specified time-period agreed at the outset. Currently no PAM staff use this scheme, as two more flexible approaches (see below) can be used.
- Annually-revised restricted hours: Each springtime, a call is made by the School Administration Manager for requests to have restricted work hours placed

formally on the timetabling system, or for non-teaching staff, to have regular earlier/later start/finish times agreed, typically because of childcare or other caring responsibilities. This same approach can be used by staff for other reasons, e.g. medium-term health issues including pregnancy. If approved by the Dean, such requests result in a prioritised effort to accommodate the restricted hours in timetabling. Staff who have had timetable restrictions approved in recent years are denoted in **Table 24**, showing that these are used by a healthy proportion of staff, legitimizing the practice of adjusting work hours when appropriate.

Year	Academic staff		Professional Staff	
	F	M	F	M
2015/16	1	6	2	-
2016/17	1	8	2	-
2017/18	1	5	2	-
2018/19	1	6	2	-

Table 24. PAM formal working arrangements (for class-timetabling constraints) agreed via the Dean

- Informal, ad hoc flexible working: when staff have flexibility in their scheduled class hours, they may on occasions work from home, or use time off in lieu of additional hours worked at weekends or unusually long days. This introduces a degree of flexibility which can assist in the management of caring responsibilities and achieving a healthier work-life balance. The use of informal flexible working was evidenced through one-to-one interviews by the AS Officer, which have revealed that flexible working is strongly supported within the School.

Case study examples of real flexible working arrangements for PAM staff (including senior male academics) are described on our staff wiki, evidencing a variety of possibilities to aid discussions with line managers.

(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.

There is flexibility within University policy to consider any requests for part-time, term-time or job sharing after a return from a career break, e.g. due to maternity leave, as per the 'contractual flexible working request' outlined in Section 5.5(vi), and with pay reduced accordingly. This could be for a permanent or temporary period if agreed. Such requests, including for changes to an existing contractual change, are considered on an individual basis. Such possibilities formed the basis of the tapered start to the post of a staff member recruited to UH while on maternity leave at another University (see Section 5.5(iii)).

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.

According to the ESS, staff view the School overall positively on E&D, using the following top three descriptors to describe PAM as a place to work:

- “supportive”
- “inclusive”
- “welcoming”

Post-Bronze-Award Impact: In the 2017 PAM Equality Survey, 89% of men and 63% of women “perceive PAM to be an equitable place (e.g. with respect to salary, funding, office/lab space, etc.)”. The remainder perceive women as being at a “slight disadvantage”.

Also positively, 100% of men and 88% of women report that they do not feel they are treated unfavourably because of their gender. Although, 12% of staff (same for women and men) note that occasionally some other staff are treated unfavourably because of their gender, and 25% of women (also 4% of men) note occasional unfavourable treatment to others due to other protected characteristics. Around two-thirds of staff (62%F:73%M) stated they would feel confident reporting isolated instances where they feel they or someone else has been treated unfavourably – which implies that one-third would not, and this finding has helped (alongside the IOP Juno programme) to motivate the School to call out bullying and harassment (B&H) in a similar way to how it raised the profile of gender issues in 2014.

The School has published a local School B&H policy, which complements and runs alongside the existing UH 0% tolerance policy, on the PAM wiki. We have also helped to raise awareness of the University’s Dignity and Respect Advisors network by displaying posters in several prominent locations, and circulating emails and speaking about it at staff meetings. Three members of the PAM EC (Equality Champion (F), Chair (F) and former Dean (M)) have taken the central B&H awareness course in 2017/18. We will begin to roll this out initially to all managers, and then to all staff, in 2018/19 (**Action A22**), to help eliminate even low-level perceptions of unfavourable treatment to others.

Quote: “As training for my role as the PAM Equality Champion, I attended the UH Dignity & Respect Awareness course. I found it very helpful for this role, since it improved my understanding of what amounts to harassment and bullying, and identified strategies for resolving such situations.” – UH8 (F), 2017

Action A22: Increase awareness of 0% tolerance policy towards B&H and how to deal with issues. Roll out B&H training for all managers and eventually to all staff, in 2018/19.

(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.

Termly School meetings of all staff, and email updates, ensure awareness of changes to HR policies. Additionally, the EC Chair (F) has a standing item on the School Meeting agenda to highlight E&D matters. In 2018/19, this will include progress in addressing actions (such as **Action A22**). Furthermore, the School's HR partner also attends these School meetings and, along with the EC Chair, is a member of both the EC and the SEG, and is therefore readily able to advise on HR policy and implementation matters.

Additionally, the appraisal process is now phased in such a way that all line managers are appraised by the Dean in advance of conducting their own appraisals, to ensure they are up-to-date and that policies are applied in a consistent way. Any major issues identified via appraisals get fed back to the Dean so he is kept in the picture.

(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.

The major School committees (see also **Figure 1**) are summarised in **Table 25**.

School Executive Group: Most influential decision-making committee, chaired by the Dean. Its terms of reference include 16 members (4F:12M) (25% female) with defined lead roles in the School: Associate Deans (3 senior M academics), Chairs of H&S (senior M researcher) and EC (senior F academic), Heads of research groups (4 senior M academics), Admissions tutor (senior M academic; F deputy), School timetabler (senior M academic; F deputy), PAM admin manager (senior F), school finance team (1M:1F) and HRBP (F professional staff). As the gender balance improves in the School through our actions on recruitment, and as female deputies move into these key roles, so should the representation of female academics. But this will take time to have noticeable effect. A summary of non-confidential matters are circulated to all staff, and any major items are discussed/announced at School meetings.

Committee	Composition						
	Acad. & Res.		PSS		Students		F%
	F	M	F	M	F	M	
SEG (May'18)	1	11	3	1			20%
SAC	3	9	2	-	1	2	35%
L&T Committee	3	7	1				36%
EC (Table 2)	5	8	4	2	2	2	48%
Research Comm.	-	6	-	-	-	-	0%
CAR Management Committee	2	4	1	0	1	0	50%

Table 25. Composition of main PAM committees by gender

School Academic Committee: Senior committee for matters of academic quality, serves as the official interface between the University's Academic Board and the School. As such, its terms of reference specify a particular membership reflecting key roles in the School.

Research Committee: Membership comprises six specific roles which are currently all held by senior men: Heads of research groups, School space champion, Associate Dean Research. This committee is very gender-unbalanced, but inherits this membership through the roles held by individuals. This indicates a lack of gender diversity in senior research roles, which is at the heart of our AS and IOP Juno Award efforts to attract and retain a higher proportion of women staff.

CAR Management Committee: Comprises 4F:4M, including a mix of defined "roles" and reps (rep roles are rotated annually: director (M) and past director (F); PG tutor (M); staff reps (2M); postdoc (F); 1 PGR student (F); and CAR Admin staff member (F).

EC: Discussed in Section 3, is 48%F and can take in a broader set of women's views through surveys, interviews and focus groups. Matters are fed through to various committees.

The ESS revealed:

- 63% of women/69% of men feel they have been "given the opportunity to sit on any committees within the School or wider university";
- 23% of men/25% of women had not;
- Remainder stated "n/a".

The lack of gender diversity in senior roles found on the Research Committee makes clear that diversity amongst senior researcher roles has yet to be achieved. Being a member of a committee or holding specific responsibilities, e.g. as Programme Tutor, also contributes to career progression, since this is advanced when individuals take on responsibilities that extend their knowledge and competencies. While many committee roles or roles of responsibility are advertised (e.g. **Case Study 2**), not all have been advertised in the past. SEG will consider whether this should be made universal in future (**Action A23**).

Action A23: Review gender balance on committees and in important School roles to help revise and consider processes for filling vacancies.

(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?

External posts are generally brought to the attention of staff via emails, which may or may not be followed up by encouragement from line managers or others for individuals to seek external posts. For example, in the past, two members of the School have held seats on the University's Academic Board. When staff representative posts have come up for election, both had advocated that School staff seek appointment to the Board. SEG will consider whether it should seek systematically to nominate staff for external committee posts and the role of the appraisal system in achieving this (**Action A23**).

(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 a transparent workload allocation model that has been used for many years and which:

- Distinguishes in detail between time allocated to teaching on modules including time allowances for preparation, teaching, assessment and administration;
- Includes time allowances for research, scholarship, administrative roles, outreach and recruitment;
- Is fully transparent with all staff able to view what every other staff member has been allocated. The same criteria apply to staff irrespective of gender, but there is flexibility to reduce commitments for individuals where it is appropriate to do so, e.g. for ill-health or for staff returning from maternity leave.

The ESS revealed that the majority of staff (100%F, 76%M) find the “current workload model fair and transparent across the school”. Dissatisfaction comes not from the model but from the amount of administrative works that goes with it; both men and women cite they feel they are given a disproportionate amount of admin (25%F, 7%M) and teaching (13%F, 19%M). These figures make interesting reading against gender-disaggregated data from the 2017/18 workload model, which indicate that men and women receive similar teaching allocations (average 0.26 FTE for men, 0.28 FTE for women), and that men have on average a slightly higher administrative load (average 0.30 FTE for men, 0.22 FTE for women) albeit with large individual variations depending on research engagement and major roles (e.g. the two programme tutors are both male).

(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.

All major School meetings and seminars are timetabled to start no earlier than 9:30am and finish by 4 pm, to accommodate staff with caring responsibilities who would not be able to attend late meetings or would miss out on post-event networking.

(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.

The School has a weekly astrophysics research seminar that has achieved a female speaker rate of 35-45% over the last five years (**Table 26**).

Academic Year	Organiser gender	Female speakers	Male speakers	Female %
2011/12	M+M	6	18	25%
2012/13	M+F	6	19	24%
2013/14	M+F	11	20	35%
2014/15	M+M	11	23	32%
2015/16	M+F	15	17	47%
2016/17	M+F	7	13	35%
2017/18	M+F	12	18	40%

Table 26. Weekly research seminar speakers, by gender

In 2014, the EC established a PAM Prestige Colloquium series to bring in typically six senior academics over the academic year, one per month, to deliver high-level colloquia appropriate to a broad physics and maths, staff and student audience and help draw the School's diverse research and scholarship communities together. UGs are invited using email, the VLE, posters and a TV display panel in the main School reception area. Serving both the staff and student bodies, it was also intended that a high proportion of speakers should be senior women, to help overcome stereotyping in our predominantly-male disciplines.

Post-Bronze-Award Impact: Over the four years 2014/15-2017/18, we achieved a gender-balance amongst PAM Prestige Colloquium speakers of 43%M:57%F.

It was noted by our admissions team that the stock images used in our prospectus and on the PAM website did not reflect the diversity of our students. Therefore, we organised a photo campaign of our students in lectures and labs, for use in promotion and Open Day materials. Our PAM equality page now highlights images and career paths/case studies of several female members of staff (PGR, postdocs, academics), which we intend to broaden to include more case studies from men with caring duties as well as BME.

Our International Women's Day events in 2017 and 2018 also celebrated women in physics and mathematics, raising the visibility of role models – see also Section 5.3(iv). In 2018 we collaborated with Computer Science, Engineering and the Equality Office to put together an open event for all of the UH community, producing a short film (led by an EC member) about inspirational women in science. This was screened in the School's 10m inflatable planetarium and widely advertised (**Figure 12**). Approximately 150-200 people visited, and the video was posted online.

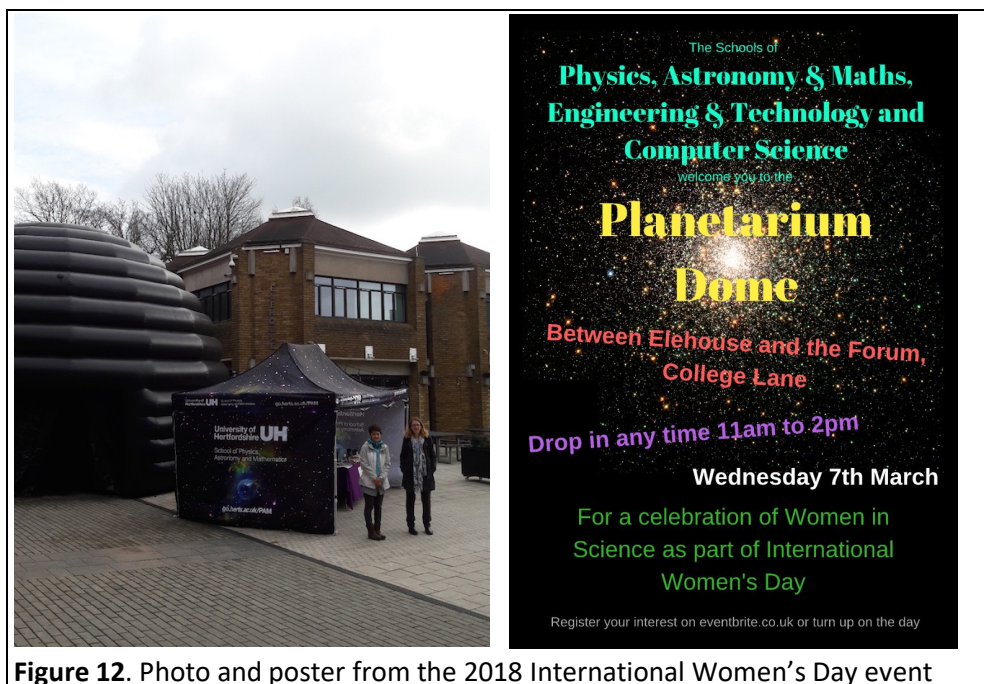


Figure 12. Photo and poster from the 2018 International Women's Day event

(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.

The School has a dedicated full-time Outreach Officer who works with SEPnet and the Ogden Foundation to help develop engagement in STEM by (principally) KS2-KS4 students. The outreach team supporting the officer consists of a team of male and female UG and a few PGR students.

Post-Bronze-Award Impact: On our outreach programme, visiting-group hours hosted by female students has increased to 26% in 2016/17 and 37% in 2017/18 (up from 18% from 2010/11-2012/13).

Other academic and research staff also participate in outreach activities. EC members alone have provided three careers talks or advice sessions to local all-girls schools over the last two years, including one associated with IWD 2018.

6196 words

SILVER APPLICATIONS ONLY

6. CASE STUDIES: IMPACT ON INDIVIDUALS

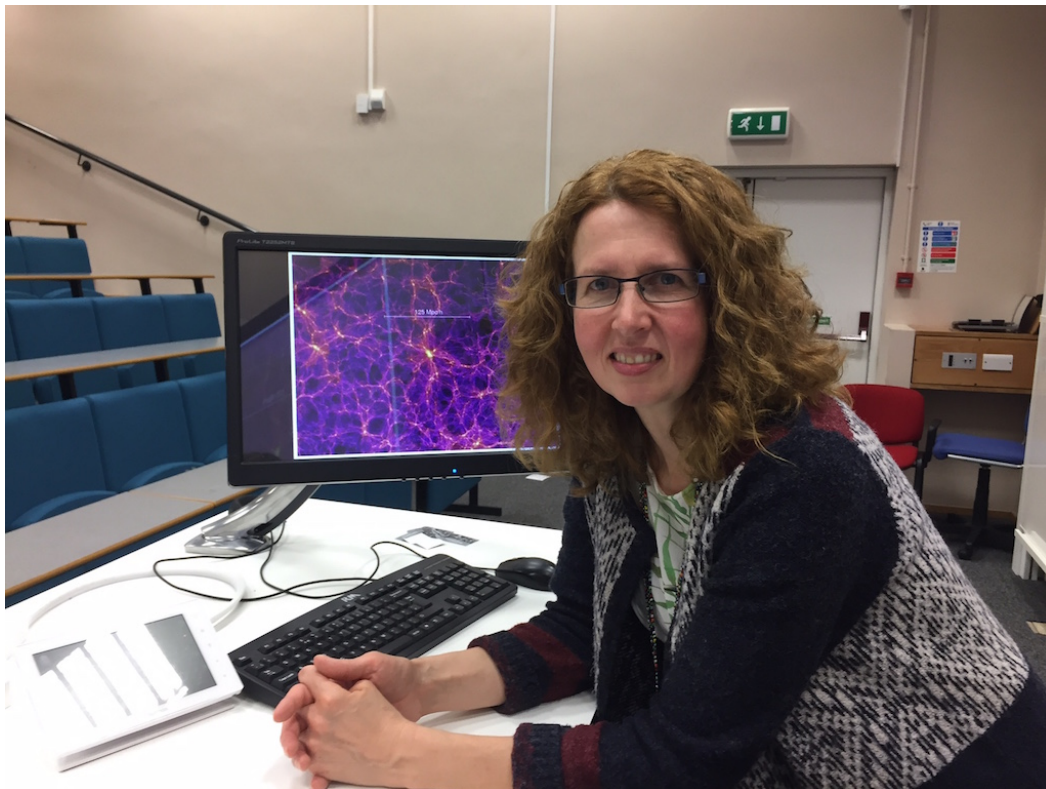
Recommended word count: Silver 1000 words

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.

Case Study 1: Dr Carolyn Devereux



I am a Daphne Jackson Research Fellow that is supported by the Science and Technology Facilities Council and the School. In 2014 I applied for a Daphne Jackson Fellowship following a long career break to raise my children. Through self-study I had become interested in astrophysics (my previous research being liquid crystal displays). I chose to apply to UH since it was within commuting distance and it had a large astrophysics department. Originally, I contacted Dr Kristen Coppin since I was interested in her extra-galactic research. She was about to go on maternity leave so forwarded my information to Dr James Geach who agreed to be my supervisor, with Professor Martin Hardcastle as my primary supervisor. For me, contacting unknown researchers at universities was the most difficult thing in the whole application process (all my

information was gained from online research, for which the School's website was very helpful) and having someone who was prepared to take a risk in allowing me to do research is what has made the most difference to me.

The Daphne Jackson application process was long and rigorous (along the lines of a post-doc application) and prepared me for what was required in the academic world. Dr Geach was very helpful in developing the research plan and reviewing my application proposal. The Daphne Jackson Trust has provided invaluable support and guidance to me and I am grateful to them for the opportunity to get back into research.

The first two years of the fellowship was part-time and I have just started working full-time for the final year. Although my children are older it was necessary to start part-time since there were still demands on my time at home. The School has provided a very flexible environment to work in which has helped me juggle the research and my family commitments. Working part-time does make getting the research done more difficult though, since there are the same number of seminars and meetings and less time to do the research.

As part of my re-training in astrophysics I have been encouraged by my supervisors to extend my knowledge and skills. I have attended 5 astrophysics lecture modules, many seminars, 2 workshops and 4 conferences including one international conference where I gave a talk. This year the department gave me the opportunity to develop my teaching skills through laboratory demonstrations and giving several lectures on cosmology. I have also been involved in the departmental outreach work, giving talks and arranging activities. I have been able to attend general skills courses run by UH such as time management and publishing skills. All these things have developed my knowledge and confidence and will be helpful in my future career.

Since working in the School I have been struck by how friendly and accepting the people are. There are researchers here from all ages, backgrounds and countries and we do research together. I feel people are here to help me do the research. This environment has made it a pleasant experience to work here and I feel well supported.

Case Study 2: Mrs Carrie Ricketts



I started working in PAM after a career break of several years to care for my young family. During this time, I worked from home on a very flexible part-time basis, but when my children started school I was keen to return to the workplace.

I was initially attracted to the role within PAM because the job advert specified that it was seeking a part-time or full-time candidate. When I got the job, it was agreed that I would work part-time at 0.5 FTE. This means that I have been able to combine a career with parenthood and pick up my children from school three times a week.

I was interviewed by a panel of three men and two women. This evidence of an inclusive culture was appealing to me.

After starting the job, I received help and support from a mentor within the department, as I had little prior teaching experience. This took the form of weekly meetings for the first six months of my time at the University.

I have benefited from several training and development opportunities in my time here, in particular by attending the CPAD course, which is provided centrally by the Learning and Teaching Innovation Centre within UH. My attendance on this course was reflected via a specific allowance in my time allocation in the PAM workload spreadsheet, which is circulated to all academic staff. I was allowed to take the modules at a slightly slower pace compared to a full-time employee, to prevent the assessments becoming too much of a burden on my time. I eventually completed all four modules and gained a Postgraduate Certificate in Education.

When I had been working at UH for just under a year, the Dean of PAM sent an email to all academic staff detailing some administrative roles which had become available within the School, including the position of Placement Tutor to support students spending a year completing an industrial placement as part of their degree. I admired

the transparency of this method of communicating the vacancies. I contacted the Dean in response to his email, and was successful in obtaining the position of Placement Tutor which I have held ever since.

Similarly, after six months at UH, the School Administration Manager emailed all academic staff asking for volunteers to join the School Academic Committee as a member of academic staff. I took up this opportunity for a term of three years.

When I had been working at UH for just under two years, I was encouraged by my line manager to apply for promotion, from Lecturer to Senior Lecturer. I also received encouragement from the chair of the Equality Committee, of which I am a member, during one of our informal 'Women in PAM' lunches. Both my line manager and my old mentor helped me with my application, which was successful.

I feel very fortunate to work here and to have benefited from these opportunities.

996 words

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 successfully renewed its Juno Practitioner Award in 2018. In its feedback, the IOP recognised the progress made since the original 2015 award. The feedback letter is presented here as further evidence of progress made in the School since 2015, i.e. during the timeframe of our AS Bronze award.

IOP Institute of Physics

25th January 2018

Dr Mark Thompson
Dean of School of Physics, Astronomy and Mathematics
University of Hertfordshire
College Lane, Hatfield
Hertfordshire AL10 9AB

Dear Mark

Juno Practitioner Renewal

Thank you for your recent application to renew your Juno Practitioner status for the School of Physics, Astronomy and Mathematics.

We are pleased to tell you that your Practitioner status has been renewed, as it was clear from your application that effort has been made, and evidence is presented of this, to address all of our main feedback points. The Juno Assessment Panel judged you to be performing well against principle one and you have moved forward in many areas across all the principles. The senior management commitment is evident and there is clearly a good reporting structure and resources to carry out a wide range of activities. Your application clearly demonstrates that you have identified issues and barriers, and there is a strong commitment to addressing these.


The panel particularly commended the following areas:

- Your Women in Science programme that has developed considerably since 2015.
- Achieving 50% female speakers for colloquium series.
- Implementing cross-school activities to promote networking.
- The overhaul of appraisal structure to focus on staff development requirements.
- Positive E&D statements in job adverts
- There was a very clear presentation of the original action plan with annotation to indicate what is embedded (with evidence), what is incomplete, and what has not worked. Revised actions are presented, and prioritisation is demonstrated.

Your Practitioner award is again in place for three years and after this time we would expect you to apply for Champion, unless there are exceptional circumstances within your school, which would warrant a second renewal.

We are looking forward to visiting the school in the very near future. We hope that, by having a positive and constructive dialogue on feedback on further actions needed to progress towards Champion, we can provide further support.

The Institute of Physics, 76 Portland Place, London W1B 1NT, UK
Tel: +44 (0)20 7470 4800 Fax: +44 (0)20 7470 4848 Email: physics@iop.org www.iop.org
Incorporated by Royal Charter Registered charity number 205555. VET registered 05-015-0203-81. Institute of Physics Registered in England under Regulation No 203851.
Registered Office: 76 Portland Place, London W1B 1NT. Chief Executive: Dr Robert Moly-Slater (Phys. Eng)



IOP Institute of Physics

As you know, the Institute encourages all Juno Practitioners to disseminate best practice by engaging with the physics community on these issues. As such, we hope that you will be happy to be involved in future Juno workshops/mentoring of departments when the occasion arises. We would greatly appreciate your involvement in any such activities.

With best wishes,
Yours sincerely



Professor Valerie Gibson
Chair, Juno Assessment Panel
gibson@hep.phy.cam.ac.uk

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.

	High Priority Action		Mid Priority Action		Low Priority Action
--	----------------------	--	---------------------	--	---------------------

Ref.	Planned action/ objective	Rationale	Key outputs and milestones	Timeline		Person responsible	Success criteria and outcome
				Start date	End date		
Section 3: The Self-Assessment Process							
A01	Raise awareness amongst staff and students of E&D activities and positive outcomes for both men and women.	2017 Equality Staff Survey and UG/PGR focus groups revealed some lack of awareness/belief in the positive effect of Juno/AS initiatives on both men and women.	(i) E&D briefings at each School meeting (3x / year) (ii) Annual E&D lunchtime seminar for staff+PGR, and timetabled seminar for UG, established presenting E&D data and actions/progress (iii) Add a wider range of case studies of flexible-working by men (not just	Already occurs Autumn 2018 Autumn 2018	In perpetuity Annually Spring 2019	(i) EC Chair (ii) EC Chair, Dean & EC data working groups (iii) EC website/ wiki working group	2019 & 2021 staff surveys and UG/PGR focus groups show a 50% increase in awareness and positive views of E&D compared to 2017 survey

			women) to wiki & Equality website				
A02	Continue our biennial PAM Equality Staff Survey and UG/PGR focus groups.	Will enable us to measure the perception of equality in the School and the effectiveness of our action plan at all levels over a long baseline.	(i) Survey results to be analysed by the EC and actions either revised or created as needed (on a biennial basis)	2017 (inaugural survey)	February 2019, 2021, ...	EC survey working group including student reps	EC Survey response rate maintains an increase from 50% (in 2017) to >75% in 2021 UG/PGR focus group participation to increase by 50% by 2021
A03	Continue our series of women's forums and similar activities.	To enable networking for women UG/PGR/staff and to collect and monitor equality issues relevant to women's career progression.	(i) Continue with termly Equality lunches (with 1 out of 2 open to all) (ii) Annual induction event for UGs run by female staff/PGRs (iii) Lead an annual IWD event open to all	Underway 2015 Underway Autumn 2017 Underway Spring 2017	Annually Annually Autumn Annually Spring	WIP Events working group	>75% of women staff and PGRs, and >25% of women UGs, attend one or more events per year and give positive feedback to organisers
A04	Ensure that E&D matters are incorporated into strategic and operational planning in the School, and that these address students directly, not just indirectly.	To increase awareness among staff and students of E&D matters and embed it in the culture of the School.	(i) Provide E&D awareness training during UG/PGR induction (ii) Hold leadership workshops for senior female UG/PGRs (via SEPnet)	Autumn 2017 2019/2020	Annually Biannually	WIP Events working group	Staff/UG/PGR engagement with E&D issues increases by 50% compared with 2017 Equality Staff Survey and student focus groups

A05	Further promote our PAM Equality Champion as a confidential contact to staff and students.	High proportion of (predominantly) UG/PGR are unaware of who the Equality Champion is and the purpose of the role.	(i) Maintain an “open door” policy and monitor uptake (ii) Encourage engagement via termly AS/Juno drop-in sessions	Underway 2016; monitor from Autumn 2018 Autumn 2019	In perpetuity Termly (review annually)	PAM Equality Champion	50% increase in awareness of the Equality Champion and role reflected in surveys/focus groups
-----	--	--	--	--	---	-----------------------	---

Section 4: A Picture of the Department

A06	Ensure continued high visibility of women on outreach and recruitment activities – recognising that achieving social change of the required magnitude is a long-term activity.	UG focus groups revealed awareness of female role models in the School at open days, leading to a positive impression of the School.	(i) Women account for >1/3 rd of outreach & recruitment hours (ii) Women account for >2/3 rd of outreach & recruitment events (iii) Women account for >1/3 rd of School imagery (websites, brochures, etc.)	Autumn 2018 Autumn 2018 Autumn 2018	Monitored and reviewed annually	Admissions Tutor and Outreach Officer	UG focus groups continue to cite visibility of female role models and a positive impression of the School >20% increase in fraction of applications from female UGs by 2021
A07	Participate in University's BME Success Project to understand and overcome factors that influence lower success rates for some BME students.	Failure rates on modules are higher for Asian and Black students than for Chinese and White students.	(i) Investigate data for factors (ii) 1 st and 2 nd year tutors advised by BME Advocate on risk factors, and pre-empt risky behaviours	Already occurring Autumn 2019	Monitored and reviewed annually	Programme tutors	Failure rates no longer dependent on ethnicity
A08	Ensure that the School environment is one in which	Feedback from PGR applicants suggests that the School seems	Women interviewed for PGR places:	Winter 2019	Reviewed annually	Director of CAR	>30% rise in acceptances from

	women interviewed for PGR places will wish to join as they embark upon their research careers as PGR students.	friendly and supportive of women's careers through visibility of female staff at interviews.	<ul style="list-style-type: none"> (i) Meet other women during their visit (staff or other PGRs, and that interview panel includes at least one female staff member) (ii) Are made aware of support for women scientists in the School (iii) Receive a link to the PAM E&D pages and wiki in their offer letter 			(member of EC) PG Tutor	female applicants by 2021 Positive feedback from PGR interviewees and biennial PGR focus groups
A09	Encourage more women (and other underrepresented groups) to take up posts in the School.	Both female and male staff cite a notable deficit of senior female role models in the School (2017 Equality Survey)	<ul style="list-style-type: none"> (i) Ensure at least 40% female representation on interview panels (typically 2+ women in a 5-member panel) (ii) Ensure that interview panels are diverse in other respects (e.g. experience, age, ethnicity) (iii) Promote UH and School family-friendly policies to applicants and positive E&D 	Autumn 2018	In perpetuity	Dean of School	>20% increase in the proportion of female applicants and hence fraction of staff by 2022

			statements in job adverts (iv) Continue work towards UH Equality Objective to increase number of BME staff at UH9 and above				
A10	Ensure that promotions criteria are understood by all staff and staff are encouraged to plan their progression to higher grades.	Promotions criteria are already on the UH intranet and PAM wiki, yet 2017 Equality Staff Survey reveals lack of clarity of the process/criteria and also a lack of women in more senior roles (which is also apparent in the data).	(i) Annual promotions seminar established (ii) Promotion planning evident in appraisal actions plans	Winter 2019 Winter 2020	Annually Reviewed annually	Dean of School Line managers	>20% higher fraction of women in more senior roles in the School by 2021 >50% increase in awareness of promotions processes and criteria in future staff surveys
A11	Understand the basis of perceptions that part-time and flexible working delay career progression, staff experience of induction (see below), and act to ensure that part-time and flexible working options are promoted to staff and potential applicants.	There is a perception among staff from the Equality Survey that P/T and flexible working delay career progression.	(i) Focus groups held to further understand staff perceptions around P/T and flex working (ii) Examples of P/T and flex working to be shared on the staff wiki/webpages (iii) Ensure that P/T and flexible working options are promoted to staff and potential applicants in job	Winter 2019 Autumn 2018	2020	AS Officer / EC Survey Working Group EC webpage/wiki working group	Equality Survey demonstrates a 50% increase in positive perception around flexible and P/T working

			wording, e.g via “happy to talk flexible working” logo				
Section 5: Supporting and Advancing Women’s Careers							
A12	Increase the proportion of females (at least two women) on staff recruitment interview panels.	It was raised via a Women in PAM Network lunch that female staff may feel outnumbered on selection/interview panels and that there was a desire to maintain an increased female proportion on such panels (but without causing “committee overload”).	(i) Minimum of 2 female staff on each staff recruitment panel (aim is for 40%, but minimum of 2) (ii) Workload will be retroactively adjusted for staff undertaking this work, or borrowing female staff from another School or institute if appropriate	Autumn 2018 Summer 2019	2021 (for review)	Dean of School	Female staff report in focus groups that they no longer feel outnumbered on recruitment panels and that work-loading is being appropriately adjusted
A13	Raise awareness of different pathways available of how to develop one’s career to work towards promotion.	2017 Staff Equality Survey revealed that 20-30% of staff did not feel supported or encouraged to go for promotion.	(i) Annual promotions awareness seminar (ii) EC Chair to raise at SEG whether the School should hold an annual promotions readiness review, which could serve to encourage and offer practical support to people who might	winter 2019 Winter 2019	Annually	Dean of School Dean of School / SEG (which includes all line managers)	2021 Staff Equality Survey shows a 50% improvement in how staff feel supported in their careers and clarity on how to work towards promotion

			be reluctant to put themselves forward for promotion				
A14	Ensure that female (and male) researchers are supported in their career development through a wide range of professional (RDF) and E&D (Juno/AS) activities.	PAM now has a significantly higher fraction of women researchers than in the past and we want to help support their development and retention for the future.	(i) The wide range of professional (RDF) and E&D (Juno/AS) activities/ opportunities taken up (monitored at appraisals and reported to SEG)	Summer 2019	Annually	Line managers and SEG	2019 Staff Equality survey shows >90% staff feel adequately supported and offered career development training and opportunities and know how to access them; Staff on fixed term contracts secure further employment
A15	Review effectiveness of the revised appraisal system.	In response to the Equality Survey, the appraisal system was overhauled and rolled out in fall 2017 to be fit for purpose.	(i) Appraisal effectiveness evaluation to be a standing item on SEG and reviewed annually	Autumn 2018	Annually	Dean of School and SEG	Future Staff Equality survey show a >75% improvement in frequency and perceived value of appraisals by 2021
A16	Evaluate and maximise usefulness of the Researcher Development Framework (RDF) to postdocs (specifically).	We have not yet monitored postdoc take up for RDF and wish to establish its utilisation and effectiveness to this group	(i) Hold postdoc focus groups (based on registration records) to ascertain value of RDF to them <ul style="list-style-type: none"> • Work with line managers to identify higher priority development courses 	Summer 2020	2021	AS Officer PGR Tutor and line managers	Postdoc focus groups cite the RDF as being of value and relevant for personal career development
A17	Develop reinvigorated mentorship	Staff Equality survey and WIP network lunch revealed female	(i) EC to set up a pilot mentorship scheme	Summer 2019	Reviewed fall 2020	New EC working	Feedback from pilot scheme is positive

	programme for new staff and PGR students (also open to existing staff).	postdocs and PGRs desire a formalised mentorship programme.	(ii) Full scheme would be rolled out and opened up to everyone			group to set this up	Mentorship take up of at least 25% of female PGRs and postdocs by 2021
A18	Create opportunities to help UGs learn about PGR opportunities and research in PAM and beyond.	2017 UG focus groups revealed a desire to know more about the academic/research pathways and for more interaction with research staff.	(i) Establish annual UG research odyssey in the School calendar and monitor participation (ii) Ensure UGs are informed about and welcomed to research seminars (via the PAM foyer display, emails, VLE)	2018 (inaugural)	Annually	Programme tutors / PAMSoc Seminar organisers / PAMSoc	Future UG focus groups indicate high level of awareness and opportunities to learn about the research path and opportunities in the School (such as UG Summer Research project)
A19	Promote and review the gender balance in the new 2018 UG Summer Research project.	Students tend to approach lecturers informally to do summer research and School desires to try out formalising it to create equal opportunity for all (and potentially attract more female applicants into research PGR degrees).	(i) Collect statistics on projects offered, applicants and matches, broken down by gender to look for any biases or trends	Summer 2018	Annually	PG Tutor	Uptake by female UGs at least representative of the student body (>25%)
A20	Lobby University-wide SAT to help better support women's careers through teaching cover and carers'	Teaching is normally covered by existing staff and creates a negative perception that the burden lies on an unlucky few.	(i) Establish UH policy that Schools can appoint teaching and research cover for duration of maternity leave	Winter 2019	Until achieved	EC Chair and AS Officer	Policies implemented and future Equality surveys reveal all staff aware of new policies on cover and carers fund

	fund during/after leave.	Cited as good practice by Averil MacDonald's talk and by our IOP Juno panel visit.	(ii) Establishment of a University-level Carers' fund for regularise support for occasional work demands that conflict significantly with caring responsibilities (iii) Affirm the principle that maternity and caring absences should not weaken promotional cases				
A21	Help research-active women's transition back to work from long career breaks via teaching relief (workload tapering).	Female staff interview data cited the usefulness of this to help offset loss of momentum to research after long absences. Cited as good practice by Averil MacDonald's AS workshop and our IOP Juno panel visit.	(i) Develop agreed principles regarding workload tapering for staff returning from long-term leave (e.g. maternity or shared-parental leave) (ii) Publicise policy via the wiki and School meetings	Spring 2019 Summer 2019	2019 2019	Dean of School and SEG EC Chair	Female staff interview and survey data demonstrate the usefulness via positive feedback (e.g. more papers published, recognition of research collaborations, more time for travel/conferences, etc.)
A22	Increase awareness of 0% tolerance policy towards B&H and how to deal with issues.	2017 Staff Equality Survey revealed a small proportion of staff feel that some may be treated unfavourably (B&H) and 1/3 rd of staff would not feel confident in	(i) Provide local guidance/ procedures for dealing with B&H issues if encountered or reported by others &	2018 (done)	2019	EC wiki/webpage working group PG Tutor	>90% of staff/PGR aware complete training by Autumn 2019, and 2021 Staff Equality Survey & PGR focus groups affirms staff confident to assert 0% tolerance

		reporting any instances.	continue to raise awareness (ii) B&H training to be mandatory for all managers (iii) B&H training mandatory for all staff	Autumn 2018 Summer 2019	2019 2020	Dean of School Line Managers	policy and feel confident to recognise and seek help with B&H issues
A23	Review gender balance on committees and in important School roles to help revise and consider processes for filling vacancies.	Notable lack of gender diversity in Research Committee and other School-specific roles which contribute to promotion/career progression.	(i) Review whether all committee posts and roles of responsibility should be filled by an open call for expressions of interest (ii) Consider if School should seek to systematically nominate individuals for external committee posts, and if so, the role of the appraisal system in achieving this	Spring 2018	2019	EC Chair + SEG	Committee membership reflects at least the proportion of women in the School and nominations to specific roles or committees is felt by staff to be fair and transparent (via future Staff Equality Surveys)




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

LANDSCAPE PAGE

If you require a landscape page elsewhere in this document, please turn on SHOW/HIDE  and follow the instructions in red. This text will not print and is only visible while SHOW/HIDE is on. Please do not insert a new page or a page break as this will mean page numbers will not format correctly.