

WARWICK

Juno Champion Renewal

Department of Physics

Warwick University

November 2020*



* Submission of this Champion renewal, due April 2020, has been delayed by Covid-19 to Nov 2020; the data presented is for the period up to April 2020

Dear Juno Panel,

As Head of Department, I am very proud to lead a Physics Department that was one of the first Juno Champions. I have worked hard to ensure we maintain and build on the achievements of my predecessors in establishing a welcoming and supportive culture in the department. We have continued our work to achieve consistency of practice across the department and I am proud of our progress since the last Juno Champion renewal in 2016. In this application, we focus on the departmental efforts in addition to those of the University.

We are delighted to submit our documentation for renewal of our Juno Champion status, including this letter of support from me as Head of Department, an overview of our progress since our last award in 2016, and a new action plan detailing the activities the department will undertake over the next four years. We are grateful for the support from the IoP during the Champion renewal visit in April 2019 that has helped us to reflect on past actions and frame these next activities.

In following the Juno Principles over many years, we have not only improved career prospects for female physicists, but we have also applied them to improve the working conditions for all staff, for instance in developing flexible working and parental leave arrangements. Our forward plans at this renewal continue that trend by expanding the reach to other under-represented and protected groups: we have students, staff and visitors from 27 countries and across 6 continents, so we focus on race and ethnicity; we have openly gay and trans members of our community, so also recognise non-binary gender. Currently, the data sets for these other protected characteristics are sparse so there is little quantitative comment to make, but I do want to ensure we collect and analyse that data for report at the next renewal time. We also want to ensure all staff working in Physics benefit and so introduce a number of Actions that chime with our Technician Commitment.

Some highlights of our progress since 2016 are:

- The headline population figures show an increase in female academic staff, rising from 8 to 15, and numbers of female research staff also rising; this is in part due to our long term strategy to attract excellent early career physicists.
- We have built on our established outreach programme to increase the scale and reach of these activities.
- We have expanded the remit of our Welfare and Communication Group to include all genders, including non-binary, ethnicity, disability, and part-time working. We have started to focus on intersectionality, within the limitations of small numbers, and address any issues this shows.

Our application was written for the original submission deadline in April 2020. Since then COVID-19 has impacted on the ways we do things, but has not stopped our progress. For example, during this period we have continued to support new members of staff in joining us, often requiring more flexibility with start date and remote working to facilitate their personal situations. We have conducted two departmental wellbeing surveys to gauge levels of stress and anxiety across the population and circulated the outcomes with guidance. We have worked hard to support staff and students with caring responsibilities during the months when childcare and schools were closed. And we have established a hugely popular journal club to support 'A' level Physics students transitioning to University (20,000 visits to our website and a regular 1000 visits to the weekly journal assignment).

I give my full support to continuing to progress gender initiatives within the department and more widely. I am delighted with the progress made since 2016 and see this as a strong foundation to continue to improve. If you need any further information/clarification, please do not hesitate to contact me.

Yours sincerely,

Prof David Leadley, Head of Department



List of abbreviations

ADC	Academic and Development Centre
CERN	European Organization for Nuclear Research
CFSA	Centre for Fusion Space and Astrophysics
CMP	Condensed Matter Physics
CSC	Centre for Scientific Computing
CUWiP UK	Conference for Undergraduate Women in Physics UK
DGS	Director of Graduate Studies
DUGS	Director of Undergraduate Studies
EAP	Employee Assistance Programme
ECR	Early Career Researcher
EPP	Elementary Particle Physics
ESRF	European Synchrotron Radiation Facility in Grenoble
FTC	Fixed term contract
HoD	Head of Department
ITER	International Thermonuclear Experimental Reactor facility in France
OD	Organisational Development
PDR	Personal Development Review
PDRA	Post-Doctoral Research Assistant/Research Fellow
PGR	Postgraduate Research student
PG SSLC	Postgraduate-Staff Student Liaison Committee
SAO	Senior Administrative Officer
UG	Undergraduate student
UG SSLC	Undergraduate Staff Student Liaison Committee
URSS	Undergraduate Research Summer Scheme
WAM	Workload Allocation Model
WATE	Warwick Awards for Teaching Excellence
WATE PGR	Warwick Awards for Teaching Excellence for Postgraduates who Teach
WAPTE	Warwick Awards for Personal Tutoring Excellence
WCG	Welfare and Communication Group
XMaS	UK Materials Science Facility, at the ESRF in Grenoble

Progress against the Six Juno Principles

Principle 1: A robust organisational framework to deliver equality of opportunity and reward

1.1. Organisational framework

The Department of Physics at Warwick is a medium sized physics department with a vibrant undergraduate (UG) and postgraduate (PGR) student community, almost 200 academics, research and professional support staff (PSS) located across four buildings and with an excellent reputation for teaching and research.

Table 1: Summary of staff and student populations as of 14/2/2020

	Total headcount	Female	Part Time	BME	Declared disability
Academic - Teaching & Research	62	14.5%	6.5%	3.2%	0%
Research-only staff	87	17.2%	5.8%	24.1%	3.5%
Teaching-only staff	6	66.7%	16.7%	0%	0%
Professional and Support Staff	35	51.4%	28.6%	14.3%	5.7%
Undergraduate students	706	18.7%	NA	31.2%	9.4%
Postgraduate students	155	29.7%	3.2%	24.5%	16.1%
TOTAL	1051	21.3%	7.3%	27.2%	9.2%

The department comprises five **research clusters** with collaborative groupings beneath reflecting current research interests (Figure 1).

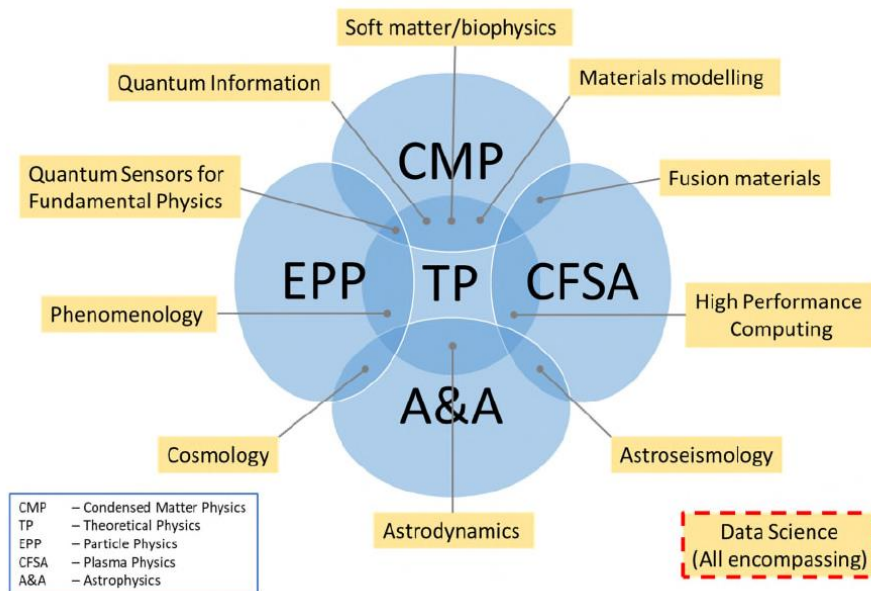


Figure 1: Summary of our research clusters

We offer four full-time **undergraduate degrees**: Physics (BSc and MPhys), Maths and Physics (BSc and MMathsPhys), Physics with Business studies (BSc), and from October 2020, Physics with Astronomy

(BSc and MPhys). Postgraduate study is undertaken by research (PhD or MSc by Research), and we lead or are closely involved in three EPSRC Doctoral Training Centres.

Departmental Committees

The Department is managed through a series of committees, with rotating membership that aims to be diverse, representative and include a broad range of people in the discussions.

The Physics Management Committee (PMC) consists of HOD, Departmental Senior Administrative Officer (SAO), Cluster Leaders and Directors of Research, Education, Graduate Studies and Admissions. PMC meets monthly to discuss overall strategy and operation of the Department. A new position was introduced in 2016/17 for a non-professorial academic to provide grass roots input and provide exposure to departmental management for a broader range of staff and ECRs; this position rotates each year.

All aspects of teaching and learning are overseen by the Education Committee, which includes the Director of Education (but not as chair) as well as two student representatives.

The Research Committee was reformulated in 2015 to provide stimulus and discussion of research opportunities, with rotating academic representatives from each Research Cluster (not the Cluster Leaders), PGR and PDRA representatives of their communities. The support staff who administer our research and impact activities are included as full members of the committee. The membership also embeds departmental link staff from the central university Research & Impact Services.

Our **Welfare and Communication Group (WCG)**, established over 10 years ago, is chaired by the Head of Department (HoD). It serves as the self-assessment team (SAT) on gender initiatives and is responsible for promoting good working practices and gender equality across the department, and considers other factors including non-binary, ethnicity, disability, part-time working and the intersectionality of these factors. WCG meets four times a year, and reports to the wider Department through a standing item at all-staff meetings and via an annual report distributed to all staff (since 2014) which summarises E&D initiatives, highlights progress against initiatives/actions, signposts to relevant policies and introduces new initiatives.

Membership includes the Director of Student Experience (DoSE), Director of Graduate Studies (DGS), SAO, and representatives from academic, research, teaching, PSS and PGRs. The WCG was restructured in December 2018 from 18 members to 11 to help focus and increase efficiency. There are currently 4 females, 6 males and 1 non-binary. By now associating membership with departmental roles and responsibilities, WCG rotates on a semi-regular basis, ensuring that the team keeps a high departmental profile. Additional members can be invited to maintain balance of gender and other factors, or for specific items (including members of the University's Athena SAT).

WCG members are involved in E&D in the wider Warwick community. The HoD is a science faculty representative on the University's Athena SAT, and both the Juno lead and SAO sit on the University Athena Network Group, where best practice is shared. Previous WCG members are on the University Gender Task Force and other departmental and university committees, ensuring their E&D responsibilities do not end when their term on WCG expires.

Resources for E&D activities are provided by the Department, with an annual budget of £10k to support the Women in Physics events, PDRA events, and financial support to female UG students – for example, to attend CUWiP (travel and registration fee), travel to ITER, co-funding an intern to work on gender statistics in summer 2019.

Other departmental committees include Health & Safety, Student-Staff Liaison Committees – one each for UGs and PGs, Promotions Committee, Exam Boards, Mitigating Circumstances, and *ad hoc* working groups. Our termly Staff Meeting is a forum for discussion open to all categories of staff.

Departmental academic responsibilities and committee membership are monitored annually to ensure proportionate **female representation** on all committees, without unduly overloading female members of staff. We have role descriptions for each academic administrative or committee role, with E&D responsibilities outlined. Time is allocated for committee membership in the workload model used to allocate teaching and administrative duties (see Principle 5). Academic roles rotate to build experience for staff to take on larger roles as their careers develop. This has worked well, for example, the previous deputy head of department was well positioned to take on the head of department role in 2015 (with the positive support of the department) and the next HOD is being prepared for a smooth hand-over in summer 2021. Succession planning for chairing major committees includes identifying the next chair and ensuring they have time on the committee before taking over responsibility. The Cluster Leaders who founded (in 2003/4) and built-up our now very significant Astronomy and Particle Physics activities have both passed on the group leadership role in the last two years.

1.2 Monitoring and evidence base

Since 2016, progress has been made in data collection and analysis with university dashboards available for UG, PG and staff by gender and ethnicity.

Academic Staff

Numbers of female T&R academic staff have increased from 6 in 2015/16 to 9 in 2019/20. This includes 2 Assistant Professors and 1 Reader, compared with 7 male Assistant Professors over the same period (N.B this does not include research staff or fellowship holders, see below). The number of permanent academic and research staff has grown in every research cluster since 2014 (Table 2):

Table 2: Summary of growth across research clusters

Research group	2014	2020	Overall increase in group size
A&A	8 (1 female)	15 (3 female)	88%
CFSA	8 (1 female)	11 (2 female)	38%
CMP	29 (4 female)	31 (8 female)	7%
EPP	9 (1 female)	14 (1 female)*	56%
Theory	7 (1 female)	10 (1 female)	43%
Total	61	81	33%

*NB One female EPP professor moved to another university for personal reasons.

For research staff (generally on a FTC) we have seen marginal growth (Table 3) and current numbers show an improvement in the pipeline (noting the 3 males at FA9 are Emeritus staff acting as Professorial Research Fellows on small FTE). Included in these numbers are appointments, since 2016, for 3 female and 3 male holders of prestigious external fellowships. Active recruitment of fellowship holders has been a deliberate part to our strategy of ensuring a strong future academic base to the department and maintaining a healthy age profile. For all of these, we offer a permanent academic position to come into effect at the end of the fellowship. To enhance their career progression, two female staff on open-ended research-only terms have voluntarily taken on teaching responsibilities.

Table 3: Comparison of research only staff (headcount)

		2015/16			2019/20		
		Male headcount	Female headcount	Female Proportion	Male headcount	Female headcount	Female Proportion
Research Only	FA 5	5	0	0%	7	1	13%
	FA 6	48	5	9%	44	8	15%
	FA 7	10	1	9%	17	5	23%
	FA 8	3	1	25%	5	0	0%
	FA 9	4	1	20%	3	2	40%
	Non-FA	2	0	0%	1	0	0%
Total		72	8	10%	77	16	17%

Taking the new T&R academic posts together with the fellowship holders who will transition to T&R positions in future, the ratio of female: male academic appointments since 2016 is 6:10. Whilst not yet 50:50 this is more than double the ratio of existing staff and significantly above the gender balance in the pipeline of researchers that form the pool of potential applicants. Nevertheless, going forward we would specifically like to see an increase in the numbers of female academics in Theoretical Physics and EPP. Numbers of female applicants for academic and research posts, especially in these areas, have been disappointing and, to address this, we propose a high-level action to proactively increase the pool of female applicants across all academic and research positions. Detailed implementation of this are discussed under Principle 2, and will be applied across all research areas.

Action 1.1: To proactively increase the pool of female applicants for academic and research positions.

Postgraduate Students

For PGRs, numbers of male students remain steady while we have seen an increase in female students from 34 (23%) in 2015/16 to 46 (30%) in 2019/20 (Fig. 2). Over the last five years, 61 undergraduates have continued their studies at Warwick, including 12 females (19% - approximately the same proportion as undergraduate level). This is very encouraging for PGR recruitment as it indicates, firstly, that we do not have a leak in the pipeline from our own UG to PG transition and, secondly, that of the students being recruited externally, we are recruiting a greater proportion of female students. This latter point may also be a reflection on international variations in undergraduate gender balance and is an encouragement to continue recruiting from diverse nations.

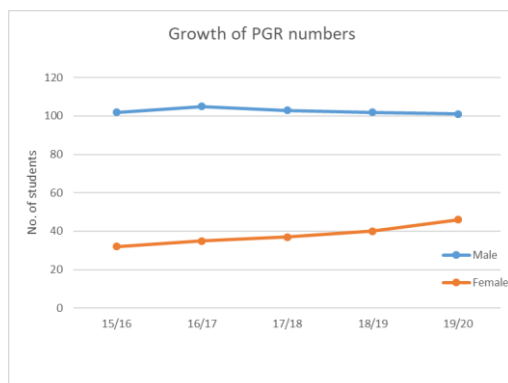


Figure 2: Growth of PGRs since last renewal

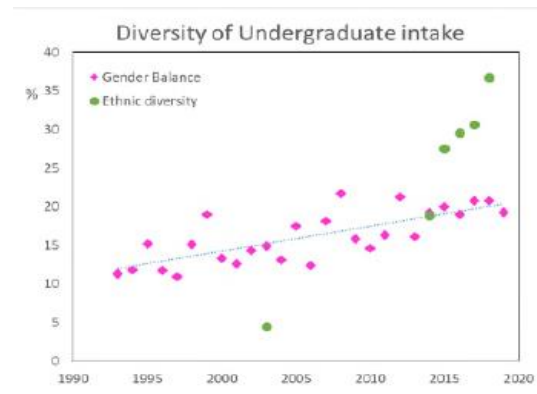


Figure 3: Diversity of UG intake over time

Undergraduate Students

Over time we have seen a slow but steady increase in numbers of female UGs (Fig. 3), although this is overlaid by large year-on-year fluctuations which makes short-term analysis unreliable. Currently 19% of the UG population is female (133 students) which is slightly lower than the national average of 23% (HESA 2017/18). Analysis of student data is an on-going Action 1.2.

Meanwhile, we have seen a marked increase in the ethnic diversity of our UG population, from 121 non-white students in 15/16 (20% of UG population) to 228 in 19/20 (32% of UG population). We are pleased to see that many of the actions taken over the years to attract female applicants have also proved applicable to increasing our ethnic diversity. The BAME label covers a wide variety of different ethnicities: we have increased overseas students from China, doubled Black students (to 18), but the majority are British and predominantly Asian. Within the BAME population the female fraction is 23%, in line with the national average but greater than for white students. The small numbers involved prevent further intersectional analysis.

Table 4: UG offers and acceptances, by gender and course, between 2015/16 and 2018/19

Course	Offers	Accepts	% offers accepted
Physics (4 year F303)			
Female	493	78	15.8%
Male	1808	272	15.0%
Female fraction	21%	22%	
Physics (3 year F300)			
Female	202	35	17.3%
Male	728	118	16.2%
Female fraction	22%	23%	
Maths and Physics (4 year FG31)			
Female	161	26	16.2%
Male	685	198	28.9%
Female fraction	19%	12%	
Maths and Physics (3 year GF13)			
Female	96	24	25.0%
Male	340	96	28.2%
Female fraction	22%	20%	

In most areas of our analysis of UG applications, offers and enrolments we find no discernible differences between male and female UGs. Table 4 shows there are some differences in the rate of acceptance at course level:

- Physics courses: Acceptances are similar for both female and male students, but at 1 in 6 are lower than we might hope for from the UCAS system offering five choices.
- Maths and Physics courses: Overall acceptance rates above 1 in 4 are higher than on Physics courses. However, female students appear less likely than males to accept an offer on the 4-year MMathPhys course. Together with a lower application ratio than the other courses this makes FG31 an outlier that reduces the gender balance from the national average for physics.

Whilst previously the Maths & Physics courses had a higher female fraction than the Physics courses, the reverse is now true with 23% on Physics and 15% on Math/Phys (Table 4). Over this period the total number of students studying Math/Phys has doubled with only a modest increase for Physics. So despite successfully increasing the female fraction of Physics students, our overall ratio has been diluted by additional men accepted onto the Maths/Phys programme. This has largely been driven by pressure to meet increasing student number targets and accepting course transfers from students

who original applied to read Maths at Warwick (where the female fraction is 29%). To offset this, we need again to increase the pool of females who apply directly to the Math/Phys programme (Action 1.3). In addition, 2020 saw the launch of new degree courses in Physics with Astrophysics. These are intended to enable further expansion of UG numbers on experimental programmes and we expect will be attractive to female applicants. We will collect similar data for the new Physics and Astronomy degree course (Action 1.2).

Action 1.2: Analyse data (applications, offers or acceptances, and degree classification) by gender for all new courses, as well as continuing to do so for existing ones, to identify any gender differences with a view to understanding what additional measures may need to be put in place to address these.

Action 1.3: Identify reasons behind gender gap in applications for MMathPhys course, using feedback gathered through focus groups of our UGs and using decliners' survey.

We ensure visibility of female physicists during UG Open Days with academics, researchers, PGRs and UGs all involved. In 2017 we invited a social scientist with expertise in gender studies to attend an open day and give feedback. WCG discussed and actioned the recommendations (to consider the difference in how male and female tour guides spoke about their research, the examples given and the images used in our promotional material).

There is a general reduction in applicants who attend offer holder open days (OHODs) and we would like to understand why (anecdotally we understand this is a sector-wide issue). Those not attending are a difficult group to survey, unless anything is raised in the decliners' survey, and we propose instead to focus on why students do attend and build on this in our outward facing communications and marketing materials (Action 1.4). We will also follow applicant "engagement" more closely by making use of the University's CRM software. Covid-19 has also forced us to develop our virtual support for prospective students, for example virtual open days and chats. Like many other institutions in the sector, we have seen quite low take-up of these on-line activities, although those who have attended report high levels of satisfaction.

Action 1.4: Seek to understand why students do/do not attend OHODs or virtual Open Days. Identify the key benefits for applicants of doing so, through feedback and focus groups with current first year students.

Analysis of Results

We seek to ensure there is no bias in assessing student work. Since 2015, all marking throughout the course has been anonymous, with the exception of 1st year lab experiments that are marked during the lab with immediate feedback, and final year project vivas that take place face to face. Degree classification (Figure 4) shows that a high proportion of students on the four-year programmes attain a first or upper second class honours degree ("Good Honours"), with no significant difference between genders. This is as expected given the progression requirement of a 2i in the second year. On the BSc stream, there are fewer Good Honours degrees, but again no discernible gender difference. In total 82% of women and 80% of men achieved Good Honours degrees in the period.

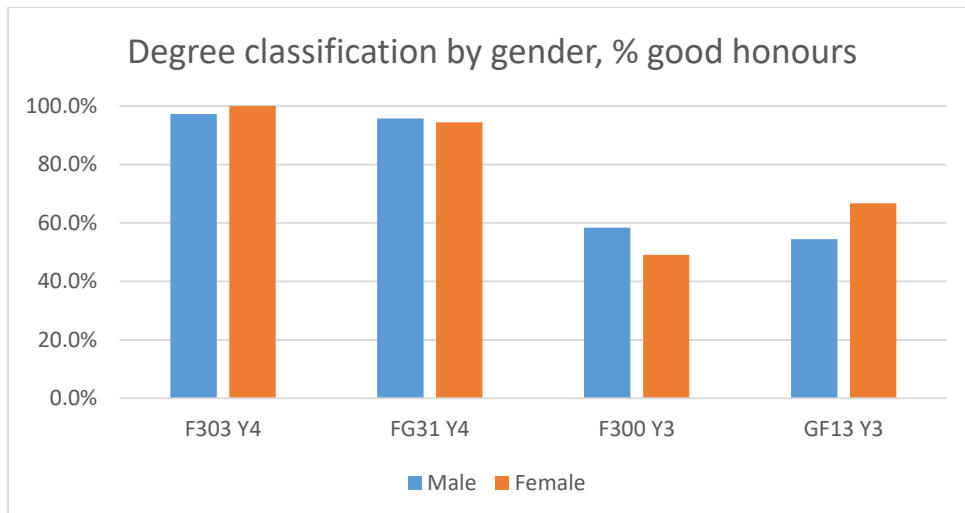


Figure 4: Degree classification by gender for all undergraduate programmes 2014/15 – 2018/19

For the Covid-19 affected 2019/20 cohort the University introduced a safety net that included a Graduation Benchmark, based on achievement before March 2019. This provided a minimum classification for graduating students to allow for difficulties in revising for and sitting their final examinations on-line. While most students were able to complete their exams in summer 2020 without detriment, for a few the Graduation Benchmark did provide the required safety net and as a consequence there were slightly more Good Honours degrees awarded in 2020.

We also analysed the percentage of Good Honours by ethnicity for students based in Physics for 2016-20, as shown in Table 5. There might be statistically significant evidence of under-performance ($Z > 1.96$) for Chinese students and possibly also for Black students, although from the small sample in the latter case the Z-score is on the border of significance. From these data, we cannot definitively say there is a Black Attainment Gap; indeed, in 2020 100% of Black students obtained Good Honours degrees. We will continue to monitor the performance of students and develop an understanding of any achievement differences that also accounts for grades on entry, whether performance improves/declines with year, language skills, POLAR attributes etc. (Action 1.2).

Table 5: Good Honours by Ethnicity 2016-20

Good Honours by Ethnicity			
	2016-2020		
	% GH	Z score*	Sample
Asian	76	-0.90	106
Black	59	-1.96	17
Chinese	63	-2.00	27
Info Refused	77	-0.33	22
Mixed	86	0.81	37
Other Ethnic	75	-0.24	4
White	82	0.99	635

*Calculations of Z-scores assumed a binomial distribution with p fixed to average values.

Principle 2: *Appointment and selection processes and procedures that encourage men and women to apply for academic posts at all levels*

2.1 Fully inclusive processes and procedures and positive action to encourage under-represented groups to apply

We have processes in place to ensure our recruitment processes are fair and unbiased including:

- single gender shortlists, requiring written justification to the HoD
- improved wording on job adverts
- offering video interviews for overseas candidates and any other applicants not able to travel to campus
- reimbursing reasonable interview costs
- offering free childcare via the University nursery
- ensuring interview panels are of mixed gender
- inviting academic candidates to meet other staff and group members in an informal setting outside of the formal interview
- promoting family-friendly policies, including flexible working, part-time or job share roles.
- promoting the wider benefits of working at Warwick.

All staff involved in recruitment must successfully complete a “Recruitment and Selection” e-training module, and refresh the training every 3 years. Staff can monitor when their training is due to expire via a physics website, which also allows the departmental HR team to issue timely reminders.

A part of our recruitment strategy is to recruit excellent early-career candidates who hold external fellowships. Alongside the usual offerings for early career academics on probation, we find this strategy hinges on being able to provide i) security in terms of an indefinite contract and ii) flexibility in terms of start date and even location. This enables the new member of staff to focus on their research rather than securing the next step in their career. Recent examples include:

- Allowing flexibility of start date and location of work for a female ECR who won a prestigious fellowship while living in another EU country, recognising the two-body issue.
- Reimbursement of relocation costs to enable a male ECR to move closer to Warwick (but not close enough to satisfy HMRC criteria for tax-free relocation) and to remain close to his support networks to help with raising a young family.

The University has a generous relocation package. However increasingly we find that research staff relocating for short FTCs are not eligible for reimbursement due to HMRC rules, and in such situations the department helps financially for example with visa and/or relocation costs.

All new staff, including PDRAs, receive a comprehensive induction, with links to the induction material sent before arrival including a welcome introduction from the HoD. We review the process annually, proactively seeking feedback to ensure it remains fit for purpose, and this yields useful information. Completion is monitored and remains at 100% for all new staff. This complements the University’s information and resources, and includes induction information with sections specifically for staff moving from overseas. Mandatory e-training modules include “Diversity in the Workplace” and “Unconscious Bias”, alongside standard health & safety, financial, information security and GDPR. There is also a termly university level induction meeting that all new staff are encouraged to attend.

The HoD meets each new staff member individually to welcome them into the department, including PhD students transitioning into research positions. This has been adopted by other Warwick

departments as an example of good practice. New staff are welcomed formally at the next Staff Meeting, and introduced through the departmental “Pendulum” newsletter.

We have a formal process of induction for PGRs, in addition to university introductions, which is delivered at the start of the academic year by the DGS. The induction material is available for reference from the PGR pages of the website. In 2019/20 the PGR induction was revamped to make it more focused in response to feedback from our students.

2.2 Taking positive action to encourage under-represented groups to apply for jobs

Recruitment data is monitored by WCG over a five-year period (Table 6). The number of T&R academic positions becoming available is relatively small at two per year, largely due to low staff turnover and the rate at which the department is able to expand in a sustainable way. Although the steady recruitment of female candidates to 1/3 of the academic positions has improved the gender balance, we would like to move faster, especially in areas of Theory and EPP, as outlined in Action 1.1.

Table 6. Recruitment figures by grade and gender from 2015/16 to 2019/20

	2015/16		2016/17		2017/18		2018/19		2019/20		Total	Female fraction
	M	F	M	F	M	F	M	F	M	F		
Academic T&R	1	0	0	0	3	1	1	1	2	1	10	30%
Senior Research Fellow	2	1	0	0	1	2	2	0	2	1	11	36%
Research Fellow	23	1	17	6	22	5	23	3	15	3	118	15%

There has been a slight increase in the female PDRA population over the period, but it is clear from Table 6 that the level of recruitment to standard postdoc FTC positions (Research Fellows) is much lower than for the permanent academic posts and well below the gender balance in the PGR pool. This is a cause of concern for the pipeline of future academics and shows that the recruitment policies developed for academic roles needs to be equally applied for postdocs.

In 2019 the Dept. agreed a new ten-year strategy that aligns to the University’s plans for a 30% growth in STEM by 2030 and included plans for 21 new academic positions over the period, with an expectation of similar expansion in PDRAs. The Covid outbreak has put implementation of the strategy back by a couple of years, but the intention to grow remains. This provides a significant opportunity to alter the gender balance and it is most important that we make the most of this chance by implementing a proactive recruitment strategy.

In each research area we will create search committees to identify potential female applicants, before posts are announced. The search committees will be led and owned by female academics in the relevant cluster who will design discipline specific ways to nurture relationships, through activities such as inviting to give seminars and setting up networks that include female PhD students and postdocs in a particular area. When academic or research positions do become available we will then encourage this pool of candidates to apply. The search committee leads will report on the applicant

pools built up to WCG and also to Research Committee so that potential applicants can be matched with external funding opportunities. In many ways this is similar to our current successful policy of working with fellowship candidates to help prepare their applications.

Action 2.1: Establish search committees in all research clusters to proactively increase the pool of female applicants for research and academic posts.

Action 2.2: Target advertising of new research and academic posts to potential female applicants, especially those identified by search committees.

As stated above, we also want to extend the Juno actions to promote opportunity for other under-represented groups and to increase ethnic diversity.

Action 2.3: Increase ethnic diversity of applications for research and academic posts, by similar process to Actions 2.1 & 2.2

In order to benefit from Actions 2.1-2.3 it would be useful to be able to intervene during the recruitment process to extend the period a position is advertised or pause the recruitment and re-advertise if the applicant list is not suitably diverse. Currently, this is not possible as HR processes only permit departments to see the candidates once the application period is closed – we would like to explore ways to achieve this intervention within the legal framework and procedures of recruitment.

Action 2.4: Develop processes with HR to extend recruitment period and/or re-advertise for research and academic posts that do not generate a diverse shortlist.

Considering the pipeline, one of our key aims is to support UGs and PGRs from under-represented groups and/or with particular needs in considering a career in academia. As well as providing mentoring, careers guidance and role models, we promote and support applications for funding. For example, a Warwick student needed an allowance to support her dyslexia; the department successfully applied to the IoP's Bell Burnell Scholarship fund. We plan to continue to encourage and support at least two applications to this and similar schemes each year (Action 2.5).

Action 2.5: Increase diversity in the postgraduate community, with support for applications to schemes such as IOP Bell Burnell Scholarships.

Principle 3: *Departmental structures and systems which support and encourage the career progression and promotion of all staff and enable men and women to progress and continue in their careers*

3.1 Transparent appraisal and development

Warwick's Personal Development Reviews (PDRs) have been in place since 2008. All staff, including staff on FTCs and researchers are offered a PDR. There is training for both reviewees and reviewers. Uptake in Physics is consistently high across all staff groups and genders (>95% of eligible staff).

The PDR provides a framework for looking at the past year's achievements and agreeing objectives for the year ahead, including discussions on inclusion and respect, outreach, impact, collegiality, leadership and training, teaching and research, career aspirations and promotion prospects. The reviewer is usually the line manager, but staff can request an alternative reviewer and it is departmental policy to facilitate that wherever possible. Conversations are held in confidence, issues raised in the PDR can be acted on with the permission of the reviewee, and generic issues are brought forward. In addition to their PDR, all research staff are offered a mid-year career development review.

Despite a near total uptake rate, this was one of our lowest scoring areas in the University's 2017/18 PULSE survey. Only 39% of female respondents and 29% of male respondents agreed "that the PDR assists me with long term career development". The figure for staff on a FTC (43%) is higher than on an indefinite contract (23%). This question was not in the 19/20 survey, the closest question being "I believe I have the opportunity for personal development and growth at the university" to which 70% of Physics respondents responded positively, with 23% neutral. We plan to do more to understand whether the PDR is genuinely unhelpful, and in that case find a way to make it more useful, or whether staff feel they get more support from places other than the PDR meeting (Action 3.1).

Action 3.1: To understand how the annual Personal Development Review (PDR) process can be made more useful and put this into practice, using survey outcomes (e.g. PULSE) and focus groups with different staff groupings.

Actions initiated from focus groups for research staff and PGRs

There is an active Physics Research Fellow forum run by PDRAs, which offers peer to peer support, networking, impartial careers advice and communication for all research staff. A focus group was run in summer 2019 to gather positive and negative feedback from this group of staff. This led directly to changes to induction for 2019/20, providing clarity on holiday entitlement and picking up concerns of a perceived lack of transferable skills training for those not intending to stay in academia.

Similarly, actions have been initiated as a result of PGR focus group, wellbeing surveys run by the postgraduates, and discussions through the women in physics network: PGR induction has been altered from a small number of intense sessions to an extended programme of specific sessions, which has received positive feedback; a conference care fund, funded by Physics, has been introduced to match the University's fund for staff; clarity on holiday entitlement has been issued; and the mentoring/buddy system has been reviewed. Feedback was that, while there is a need for support, the current system of assigning a buddy from outside of the research group (set up originally to encourage networking) was not well utilised and the students would prefer mentors from within their own research area. The scheme will be redesigned for launch in 2020/21 (Action 3.2).

Action 3.2: Relaunch formal mentoring/buddy for PGRs.

It is departmental policy for staff to allocate up to five days a year for personal development, with the activity varying by staff grouping, career stage and individual. Uptake of training is monitored annually, and this and future needs form part of the annual PDR. Academic staff training is provided centrally through the ADC, including the Academic Development Programme which all new academic staff who teach are required to complete, linked to academic probation. The Academic and Professional Pathways offers routes to accreditation by the HEA through taught sessions, workshops and mentoring. Formal training also includes university management programmes that have been with completed by 18 staff since 2016, of which 56% are female.

Although research staff and students report a lack of training, we know a considerable amount of training is available but uptake is low. Courses are advertised to Research Active Staff via a monthly newsletter and to PhD students through a training needs analysis available within the Skills Forge platform that they are all encouraged to use. Female students are encouraged to participate in the Sprint personal development programme, run through the careers service, but uptake has again been low despite liaising with the organisers to find an optimal time. We will work with staff and students to identify genuine gaps and where courses could be tailored to their needs. We will also strongly encourage staff and students to independently analyse their training needs, select courses from the range on offer, record and reflect on this as part of a professional approach to CPD (Action 3.2).

Action 3.3: Encourage uptake of training opportunities across all staff and student groups.

The department offers research staff the opportunity to gain experience of teaching. As a result, one female SRF now leads the second year microprocessors laboratory; a female RF now demonstrates in the first year teaching laboratory; a male PRF co-leads one of the UG computing module; and all our Research Track Professors act as UG tutors.

PGRs who teach are now employed with a contract as Graduate Teaching Assistants. They receive training for small group teaching and/or laboratory demonstration, which can lead to a PG Award in Teaching & Learning in HE and, following further experience and reflection, to Associate Fellowship of the HEA. This is seen as part of their professional development. Feedback is positive, but there is still a perceived need for further support, also highlighted in the latest PRES survey (Action 3.4). PGRs have also requested more information on transition to their next employment (Action 3.5). We plan to work jointly with PGSSLC, Careers Service and Academic Development Centre on these actions.

Action 3.4: Increase support to postgraduates who teach

Action 3.5: Improve information and support to guide PGRs to next destination; create comprehensive directory of destinations of PGR alumni.

Undergraduate Support

Academic and pastoral support for female UGs is outlined in the Physics student handbook; where possible mixed gender tutorial groups are made up of at least two female and two male UGs; this also applies to physics problems classes. Female students with a male tutor are introduced to female academics who they can also contact. With the increase in female staff, approximately 25% of personal tutors are female.

UGs are introduced to the Careers Service through timetabled sessions in their first and second years, and 1-2-1 interviews as they prepare CVs and applications in their final year. An annual physics employer event is attended by typically ~200 students, with employers from a range of industries including many Warwick alumni. Feedback is highly positive from both students and employers and many job offers could be traced to these events.

Approximately 30% of Physics UGs go on to further study and we specifically encourage our female UGs to consider a research career via proactive discussions with tutors, final year project supervisors and other teaching staff. Final year MPhys UGs are invited to our Women in Physics network, giving an opportunity to meet female staff and PGRs beyond their personal tutors. Research and PhD opportunities are promoted at an annual Research Showcase evening.

Financial support is provided from our E&D budget to attend national and international conferences. Since 2017, we have paid travel and registration fees for 3-4 students p.a. to attend CUWiP. Feedback from attendees has been very positive, and we would like to build on this by hosting the conference in the future, ideally in 2023 or 2024. This will give more UGs the opportunity to attend and further engage all staff in promoting the careers of female physics students (Action 3.6).

Action 3.6: Host Conference for Undergraduate Women in Physics (CUWiP,) working with IoP.

Penultimate year students are supported to take up external internships opportunities and also encouraged to partake in URSS summer research projects, for which their accommodation and subsistence is paid. The Dept. underwrites projects where students meet certain academic criteria and provides a financial top up to the funding awarded by the central University scheme. Further financial enhancements are provided to students carrying out projects outside of the UK, for example at CERN. Over the past five years 156 students have taken advantage of this scheme; 28% female participation is well above the population average.

3.2 Transparent promotion processes and procedures

The University's promotion process was revised in 2018/19, in response to institutional Athena SWAN work (with departmental representation on the University's Athena SAT and Gender Task Force); the staff categories of "research only" and "teaching only" have been renamed as Research Focussed and Teaching Focussed Academics, with clearer promotion pathways to Associate Professor and Professor. All academic staff, including those on FTC, are made aware of the annual call for promotion and encouraged to attend a Promotion Awareness Workshop (which Physics was instrumental in instigating in 2014). Support is provided by the Promotions Committee (HoD, plus one female and one male member of staff) who oversee and proactively encourage applicants and help (alongside the cluster leader/ line manager) preparation of the case and accompanying documents. The 2018 Physics staff survey showed all academic and research staff respondents were familiar with or had engaged with the promotion process.

Since 2016, 10 female and 27 male academic and research staff have been promoted, with a 100% success rate for female applicants. This includes 11 research fellows. Availability of funding is not a barrier for staff on a FTC applying for promotion e.g. a female research fellow employed part-time and recently returned from two separate periods of maternity leave has been promoted with the full support of the department. Tracking individuals, the average time to complete probation/promotion to Associate Professor is 5.3 years irrespective of gender. Women on average spend a further 3.6 years before promotion to Reader, against 4.2 for men, and then 4.3 years to Professor, compared to 3.8 for their male colleagues; i.e. 8 years from Associate to full Professor regardless of gender.

3.3 Support for Technical Staff

We are committed to supporting all staff in Physics and find the Juno Principles to be a useful framework to extend this to the technical staff who enable much of our experimental research and teaching. In response to the challenges of the Technician Commitment to ensure visibility, recognition, career development and sustainability for technicians working in HE, Warwick co-leads the TALENT programme, launched in 2020 with the 8 universities in Midlands Innovation (MI), partners in facilities & industry and with £3M of Research England funding. During Covid lockdown, this has already delivered training to technicians across MI on topics such as interacting with ‘customers’, having difficult conversations, and change management. At the UK Higher Education Technicians Summit, which attracted over 700 delegates in 2019, technicians are recognised through Papin Prizes which have been won by our Technical Services Manager and two technicians working in electron microscopy. Physics has a rolling programme of appointing trainee and apprentice technicians who rotate through our workshops and research groups. We are particularly keen that women see technical roles as an attractive career path and we now have a female trainee technician as well as a female manager of our mechanical workshop. We are also developing technician job families across the institution that will provide a career structure with both specialist technical and managerial routes for progression. We are encouraging recognition of technician’s contributions to research papers with authorship, and have already published a *Nature* paper with a technician co-author. Finally, we are keen to work with the IOP on professional recognition for technical staff.

Action 3.7: Follow Technician Commitment and TALENT project to improve training and recognition, implement Technician Job Families, and attract more female staff.

Principle 4: *Departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff.*

4.1 Inclusive culture

The HoD and other senior staff operate an open door policy (or virtual equivalent) and any member of staff (or student) wishing to discuss a matter can (and do) make a direct approach or an appointment through the departmental office.

We schedule meetings and events around the working patterns of those attending rather than prescribing they take place between set times. Where possible dates are set at the start of the academic year. Generally, committee meetings take place over the middle of the day, with lunch provided to enable attendance between other commitments. Early evening events most usually aimed at UGs and PGRs often involve refreshments. UGs tell us that providing refreshments at events immediately after teaching ends incentivises them to stay on campus to participate.

We celebrate achievements, in person in the common room or Staff Meeting, via the termly Pendulum newsletter, or more recently online. The department awards annual prizes for academic excellence for UGs, PGRs and PDRAs, and a teaching prize for staff, selected with input from the UGs. University prizes include WATE, WATE PGR, and from 2019 WAPTE, with nominations confirmed by HoD. Nominations for WATE PGR are gender balanced by Lab Coordination Committee. Of 3 female nominees 1 has won; of 12 male nominees 10 have won. Action 4.1 is to enshrine the practice that nominations of staff for external and internal awards (e.g. WATE and WAPTE) are supported every year and are gender balanced.

Action 4.1: Encourage and ensure nominations are made from the department for a wide range of research and teaching awards.

An education forum, which networks across the university, provides an engagement platform for colleagues whose primary focus is learning and teaching, and membership of WIHEA is available for those interested in shaping future pedagogy through action learning circles. For Research Active Staff, a monthly newsletter details courses available under five categories – academic writing, career development, leadership development, collaboration events, and public engagement/additional skills.

As a mechanism of dissemination, brief Research Nuggets are collected and published internally to highlight research. Feedback from PGRs and PDRAs indicates that they wish more acknowledgment for their contribution to these nuggets. We will ensure this happens, but also encourage a wider authorship of nuggets, Action 4.2. We also want to encourage greater recognition of the contributions technical staff and students make to research papers, Action 4.3.

Action 4.2: Encourage research staff and PGRs to publish their own Research Nuggets, and ensure appropriate recognition in academic-led nuggets.

Action 4.3: Ensure full acknowledgment of contributions to research from all staff, including technicians and students, in research papers and other publicity; challenge where this is not being done.

The department holds inclusive social events for all staff and PGRs which are well attended. There is a common room to encourage staff and PGRs from all four Physics buildings to socialise and network; the daily coffee time is also an important occasion for quickly resolving issues informally. Smaller events take place at group level, for example the CSC “Coffee and Cookies” every Friday afternoon. A women-in-Physics group has run (since 2014) providing a network for academics, researchers, PGRs and final year MPhys UGs to meet and discuss gender specific items.

Specific activities to support UGs include:

- small group lunches with academic staff to increase networking and promote social cohesion;
- the Physics café, run by the UG Physics Society, where an academic gives a short talk or delivers an informal help session with pizza provided.

Specific activities to support PG students include:

- a collaboration mixer where students give a one-minute talk on their research to increase awareness and encourage inter-group collaborations;
- an annual three-minute thesis challenge, prizes for the best talks;
- wellbeing tea, to encourage socialising and networking with a wellbeing focus.



Celebrations for International Women’s Day are open to all. In March 2019, there was poster session and social lunch where female staff and students displayed their research, followed by short talks from three female PGRs students and a presentation by Professor Sandra Chapman on ‘Fellowships – how to take time out for your research’. The event was attended by female and male staff and students.

Figure 5. Clockwise from top left: Poster session and talks highlighting research done by women in the department, 2019; poster for Equali-tea; photo of women in physics group taken as part of International Women’s Day 2018

Presenting positive and inclusive images

Effort is made to ensure all images in our print and online are positive and inclusive. We have a “Working in Physics” webpage (since 2012) with EDI links and information for staff, our Juno and Athena Swan action plans, departmental survey results, and case studies (updated annually) from female role models at all career stages and from PGRs (male and females).

We also aim to ensure that our public and student spaces are inclusive and representative, including a series of modern prints of female scientists in the student workrooms and soon an image from the Hubble Space telescope to celebrate 30 years of orbit (as a winner of the Hubble competition).

Research cluster leaders are responsible for ensuring gender balance of seminar speakers, which is monitored on an annual basis (Table 8). The overall proportion of female seminar speakers has risen

to 25%, but there are some groups where this is much lower. The number of female speakers in Theory is of particular concern and will be addressed in association with Action 2.1.

Table 10: Seminar speakers by gender and cluster from 2016 to date

	Male speakers	Female speakers	% Female
CFSA	60	14	19%
Astronomy	41	24	31%
CMP	39	21	35%
Theory	54	7	11%
EPP	37	11	23%
CSC	28	9	24%
Colloquia	16	4	20%
Total	275	90	25%

4.2 Transparent workload model

The workload model is a tool used by the HoD and DUGS to allocate teaching and administrative duties for all academic staff, with reduction applied consistently for staff on academic probation and allowance made for staff to deliver funded research. The model is presented at the start of each academic year at staff meeting showing the overview by (anonymised) staff member which indicates the distribution of workloads. Each member of staff is allocated 10% of their time towards duties not directly related to delivery of the curriculum or research e.g. outreach, admissions and committee work. Staff are welcome to discuss their duties with the DUGS or HoD at any time. Study leave applications are considered by the HoD. In the last 5 years, 17 applications have been approved, with 24% from female staff (exceeding the fractional population).

4.3 Outreach and Public Engagement

From a departmental survey, 83% of 78 respondents had taken part in at least one outreach activity over the past year, telling us that promotion of physics beyond the department is firmly embedded, well supported and not reliant on just a small number of people (Figure 6).

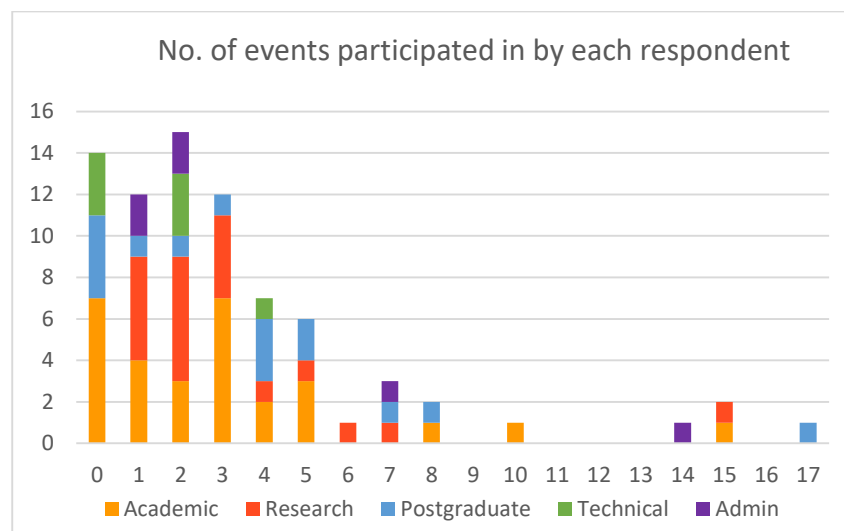


Figure 6: Outreach participation survey, academic year 2018/19

Our Outreach teams deliver outreach to over 20 schools/ 2000 children per year, thereby raising the profile of both the department and the university in the local communities and in initiating what are now well established activities. Here we describe a number of initiatives led by the department with a focus on the female pipeline:

- The annual XMaS Scientist Experience programme (running since 2015 and supported by the EPSRC funded XMaS project) gives female year 12 students from across the UK the opportunity to engage with international female physicists. 15 winners of an essay writing competition are taken to the ESRF and given the opportunity to interact with international researchers working within fields of physics. All of the participants reported that the trip “had introduced them to inspirational mentors, supervisors and role models”. Following the trip the girls stay engaged, for example by talking at the Science Gala (see later), participating the Big Bang fair, Warwick Festival of the Imagination and Sciencegrl. The University of Uppsala has launched a similar programme, modelled on our project. Two of the students from the 2018 visit subsequently enrolled to study physics at Warwick.
- In 2018 we worked with Warwickshire Girl Guiding to develop a Physics badge for Brownies. Over a weekend we hosted 700 Brownies from Coventry, Warwickshire and Solihull on campus, learning about a broad range of physics research through interactive talks and workshops and hands-on experiments led by our staff and students. Feedback was positive, the event was picked up by local news and the university’s community newsletter.



Since 2016 our established events have expanded:

- The Christmas lectures are now delivered jointly with Chemistry, Mathematics, Statistics and the Medical School, still ensuring there are strong female scientist role models and in 2019 for the first time two members of technical staff gave lectures, encouraged by our involvement in the Technicians Commitment Framework.
- The annual XMaS Science Gala (originating from the outreach objectives of the XMaS EPSRC project to encourage girls into physics) now includes over 30 exhibitors from across the science faculty and beyond, for example CERN and University of Coventry’s Lanchester interactive archive; in 2019 over 750 people attended.
- In 2019, Warwick hosted the British Science Festival. Academics, researchers and PhD students were actively involved in delivering free events across Coventry and Warwickshire, attended by a record 13,000 visitors. Both Sandra Chapman and Farzana Meru gave sell-out public lectures and Farzana was a panellist in the *Sky at Night* live recording, as part of which we ran “Art in Astronomy” competition leading to production of a 2020 calendar sold with donations to Mind.
- The Sutton Trust summer school; an initiative to give participants an insight into life at a research intensive university (e.g. staying in halls of residence, attending sessions in the undergraduate teaching lab and experiencing the social and sport facilities on campus). We know that 7 students who attended the 2018 summer school went on to apply for Physics related courses.
- The astronomy group take a portable planetarium out to schools (80% primary; 20% secondary) and youth groups. Since 2017, they have run 330 shows within schools to approx. 6200 children and 350 teachers, and reached a further 600 people attending other events on campus. 27 members of the group have been involved in this (see Table 9).

Table 9. Participation in planetarium outreach, 2017/18 to date, by staff/student type and gender.

	Male	Female	Non-binary	Total
Academics	2	0	0	2
PDRAs	2	0	0	2
Students	16	6	1	23
Total	20	6	1	27

In April 2020, our Outreach team developed ‘Journal Club’ to help students transitioning to University from ‘A’ level. This was developed in response to the Covid-19 lockdown and has gained interest from around the world in a short period of time (32,000 hits on the website in 4 months). Further development of the concept forms part of Action 4.4.

Action 4.4: Build a series of resources to help student transition from GCSE to A’ level and A’ level to university.

Although we know each activity is valuable in itself, we do not currently have the data to analyse and understand the impact of our extensive outreach programme in order to better focus our activities and track successes. We recognise the difficulty of tracing the long-term impact of outreach and working out how to do this effectively is a long-term action (Action 4.5).

Action 4.5: Develop a strategy to capture and track the long-term impact of our outreach activities.



Figure 7: Clockwise from top left: Warwick physics on Coventry and Warwickshire local radio; Brownie badge for physics, developed in conjunction with Warwick girl guiding; XMaS funded Scientist Experience Trip to Grenoble 2018

Principle 5: Flexible approaches and provisions that enable individuals, at all career and life stages, to optimise their contribution to their department, institution and SET

5.1 Supporting and promoting flexible working practices

Flexible working is in place in all areas of the department. Most formal arrangements are in the PSS teams. Requests for flexible working are considered on an individual basis, and include part-time working, working condensed hours, and changes to contractual hours on a temporary basis. Because it is so commonplace; it is widely accepted within the department. Flexible working for research and academic staff is still rarely recorded since the individual manages their commitments in agreement with supervisor/cluster leader and their formal teaching duties.

Academics with caring responsibilities can request not to lecture at 9.00 or after 17.00. We have made arrangements with the University Nursery that a child can be brought to the lecture theatre in the event they are required to lecture until 18.00 (with the Nursery closing at 17.45).

Case studies of research active staff who have changed their contractual hours have been used in the University's HR Excellence in Research application. Our staff survey showed that 85% of respondents were familiar with or had engaged with flexible working. Recent examples include:

- A female Leverhulme early career fellow, with 50% contribution to salary from the department, was permitted to work from home during her pregnancy to reduce travel (London to Coventry).
- A female academic worked from home in the last months of her pregnancy, with research students visiting her at home to continue with supervision alongside handover to the second supervisor, with a colleague ready to cover her teaching. This was done by her own suggestion, and agreed to in order that she did not have to start her maternity leave early. On return she was awarded a Returner's Fellowship to buy out teaching time.
- A female member of the PSS team worked at home around medical appointments for all three pregnancies, with maternity leave extended to allow her to take significant accrued annual leave before return and then flexibility on her return to allow her to comfortably cover school holidays for her elder child.

During 2020, many staff have been working from home and with even greater flexibility than previously. We have made allowance for flexible working, both during the lockdown and return to campus, around child care, home schooling and care for dependents with Covid. Communication was maintained throughout the period to ensure the departmental culture continued to be as supportive and collegial as possible in the circumstances. We took snap surveys to assess staff and student wellbeing at regular intervals and made adjustments to working practices where required. These surveys allowed staff to reflect on the positive and negative aspects of working from home – while many enjoyed the added flexibility others missed the structure and opportunities to meet. The extreme flexibility also led to delays in being able to consult with colleagues or complete processes. Going forward, we would like to take positive opportunities from the changes in working patterns forced by Covid-19, while ensuring operational objectives can still be met.

Action 5.1: Review of arrangements for remote and flexible working for all staff and students

The University has a clear maternity/adoption policy which line managers and HR staff in the department work through with individuals. Here we describe the actions that we routinely take *in addition* to this:

- As early as possible we engage with the individual to discuss what additional support might be required during pregnancy, to include a risk assessment and any other health and safety

implications. We discuss flexibility around medical appointments and working from home where this may be a desirable option.

- The SAO routinely makes a case to the campus car parking team to allow the individual to use disabled parking spaces in the last trimester, or sooner if required. This is for the practical reasons that the parking spaces are closer to the buildings, there are no stairs and the spaces between cars are greater to accommodate a bump.
- Flexible use of 'keeping in touch' days, inviting staff to join for informal events even where childcare arrangements mean they cannot take up formal KIT days.
- Discussions also begin to make staff aware of the provision for childcare on campus and for academic staff the support available on return to work, for example the Returner's fellowship.
- On return, staff are made aware of facilities available, for example to support breast-feeding.
- The department was the first to give guidance on maternity leave for PhD students (now overtaken by UKRI/University guidance).

All staff returning from maternity leave have successfully won a Warwick Returner's Fellowship which gives a reduction in teaching load to allow them to focus on research on their return. Whilst this is a University scheme and the award must be applied for before it can be included in the workload model, application and success is assumed when planning teaching allocations for that member of staff.

We have helped one female researcher rebuild an active academic career after a 7-year career break by co-funding a Daphne Jackson Fellowship 50:50 with EPSRC for the past three years, which she holds part-time. The department continues to support her in applying for further grants and fellowships.

Academic and research staff are encouraged to apply to the University's conference care fund, where staff with caring duties can receive a grant of up to £150 to cover additional childcare costs incurred when attending a conference or workshop. Take up is small but all requests have been successful. We have rolled this out to include PhD students as a department scheme, from April 2020.

Action 5.2: Expansion of conference care fund to PGRs.

We monitor uptake of shared parental, paternity and other caring leave. We also have examples where paternity leave has been combined with annual leave, compassionate leave and unpaid leave to help manage a personal situation, and we are sympathetic to such situations.

We have remodelled our work experience programme to offer year 12 and 13 students one week of research experience in the school Easter holidays. Applications are invited annually to ensure work experience no longer relies on a personal contact. In 2018 we hosted 6 female students. In 2019 we hosted 6 students based on WP criteria, with 2 females. We ensure all students meet female physicists during their visit, through working alongside research and academic staff and meeting informally over lunches which are provided.

For many staff whose work is focussed entirely within the department it would be beneficial to obtain greater exposure and contribute to the wider institution. We will aim to provide opportunities for staff at all levels to develop outside of Physics, which will also improve perception of University management within the department that has been a weak point on past PULSE surveys. At the same time this will increase the diversity in Physics representatives on central University Committees, incl. more ECRs, administrative and technical staff (Action 5.3).

Action 5.3: Increase diversity of staff nominated to University committees

Principle 6: *An environment where professional conduct is embedded into departmental culture and behaviour.*

In our last PULSE survey 83% of staff said “I am treated with fairness and respect” (79% female; 88% male) compared with 74% across the University. The most recent department staff survey (2018/19) showed 93% of respondents strongly agreed or agreed to the question “Are you happy with the culture of the department?”

6.1 Expectations of professional conduct

The Dignity at Warwick policy and more recent Warwick Values programme outline expected behaviours of our staff and students and the processes to report and deal with inappropriate behaviour including all forms of bullying and harassment, both on and off campus and includes work, study and social events.

The University has a network of trained Dignity Contacts who provide confidential support to individuals who may be experiencing harassment and/or bullying, details are provided on our website with a foreword from the HoD. There are two trained Dignity contacts in Physics.

6.2 Bullying, harassment and misconduct

We always include questions about bullying and harassment in our anonymous staff surveys. 100% of the staff and PGRs responding to the 2018 departmental survey were familiar with the Dignity at Warwick policy. Both the PGR and postdoctoral focus groups in summer 2019 reported that reporting structures were easy to find.

We have picked up a small number of cases of inappropriate conduct through our own departmental and staff surveys, through reporting direct to senior staff and through informal word of mouth. These have been dealt with swiftly and directly by the HoD and SAO. While instances of non-professional behaviour are thankfully low, any that do occur need to be easily reported, acted on swiftly, and lessons learned from each case.

ACTION 6.1 Continuous improvement in reporting and handling of non-professional behaviour (bullying, harassment, disputes, research misconduct etc.)

6.3 Wellbeing Support

A common comment in our surveys is that staff and students find it difficult to navigate through the support services and websites available. At the end of 2019 the University joined Big White Wall (now called Togetherall), a clinically led digital health service, and has partnered with an independent organisation to develop an Employee Assistance Programme (EAP) to provide counselling, legal advice, bereavement support, advice on medical problems and a range of information resources and self-help tools for staff. This outsourcing has allowed the internal Wellbeing service to focus on student welfare issues. We seek feedback on these services, but need to improve our own signposting and encourage the University to do likewise (Action 6.2).

ACTION 6.2 Improved signposting to support mechanisms from our own internal webpages and communications, including Wellbeing, Togetherall and EAP.