School of Physics and Astronomy
Project Juno - Champion Application
May 1st 2015

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Glossary
We include a list of standard abbreviations used throughout this application

AU    Astronomy Unit
CAPD  Centre for Academic and Professional Development
CCMMP Centre for Condensed Matter and Material Physics
CRST  Centre for Research in String Theory
GDC   Graduate Degrees Committee
GRADnet SEPnet Graduate Network
HoG   Head of Group
HoS   Head of School
HR    Human Resources
iGRASP QMUL database tool for staff recruitment
MO    Module Organiser
MySIS online tool for QMUL Student Information System
PPRC  Particle Physics Research Centre
PGR   Post Graduate Research
PGT   Post Graduate Taught
QMUL  Queen Mary University of London
REF   Research Excellence Framework
SAT   Self Assessment Team
SEPnet South East Physics network
SMART Specific, Measureable, Assignable, Realistic, Time-related
SMP   Student Monitoring Program
SPA   School of Physics and Astronomy
UB    Unconscious Bias
UG    Undergraduate
1. Introduction
The School of Physics and Astronomy at Queen Mary University of London (QMUL) is a medium-sized physics department, composed of four research groups: the Particle Physics Research Centre (PPRC), the Centre for Condensed Matter and Material Physics (CCMMP), the Centre for String Theory (CRST), and the Astronomy Unit (AU). There are a total of 49 academic faculty, fairly equally distributed across the four research areas, although all 3 female faculty work in the PPRC. We have 17 professional service staff, 31 research staff, 91 graduate students and a number of visitors and emeritus fellows.

We offer a range of undergraduate programmes, both 3- and 4-year, and have been steadily increasing student numbers over the past 5 years. The 2014 undergraduate intake comprised 149 students, of which 40 (26.8%) are female, which is above the national average.

In 2012, QMUL joined the Russell group of Universities; an achievement celebrated throughout the institution. This added prestige has an impact on the way the University is viewed by external sources, which we must take into consideration when reviewing our gender data, particularly recruitment. QMUL is a member of SEPnet (South East Physics Network), a consortium of physics departments in nine universities across the South East, providing a collaborative graduate school, outreach programme and links to employers that benefit both research and teaching.

Since achieving Juno practitioner status in February 2013, the School has undergone significant changes including a new Head of School, Professor Steve Lloyd, who started the role in March 2013, and the complete renovation of the School building (G. O. Jones building), which commenced in the summer of 2013 and was completed in September 2014. During the interim, members of the School were located in temporary offices, spread across the QMUL Campus, but since reuniting in the renovated building we have been working on forming a strong inclusive atmosphere within the School.

The University has become more engaged with Athena Swan during this period and now the following schools hold Athena Bronze awards in addition to the University's Athena Bronze (last successfully renewed in November 2013): Electronic Engineering and Computer Sciences; School of Engineering and Material Sciences; School of Mathematical Sciences; and Institute of Dentistry. The School of Biological and Chemical Sciences and the School of Medicine hold Silver Athena Swan Awards. During this time, the SPA has actively participated in the QMUL self assessment team (SAT) and this is the forum for progressing actions and escalating issues of concern in relation to gender equality.

2. Progress since Practitioner
Within the School of Physics and Astronomy (SPA) there has been an increase in awareness of project Juno and a positive attitude towards the process. Here we summarise a few of the key developments over the past two years; more details are given in subsequent sections of this report.

The size and strength of the Juno committee has increased, now consisting of 12 members covering all academic levels and all research groups within the school,
including two members who volunteered their involvement after presentations on Juno at a staff meeting. Tasks have been divided amongst the Juno committee with each member taking responsibility for separate tasks of data analysis or new initiatives. The Head of School and Juno Chair meet monthly, prior to Senior Management Team (SMT) meetings, and Juno issues are a permanent item of SMT meetings, Staff meetings and other committee agendas.

We have reviewed our recruitment procedures and made specific recommendations for improved practices in student recruitment and initiated new actions for staff recruitment. A special effort has been made to increase the number of female academics, with a new female lecturer due to start in the Astronomy Unit later this year. The benefits of these actions and initiatives are beginning to show in our data, with indications of an increase in the female ratio in the undergraduate, postgraduate and post-doctoral cohorts over the past three years.

Initiatives have been established to collect feedback from key groups within the School, and also to provide networking opportunities for specific cohorts across the different research groups. We now have active graduate and post-doctoral forums that meet termly, and have held our first women’s lunch, which is also intended to be a termly event, for all women in the School. A dedicated mentoring scheme within the School is now underway, following a consultation period to understand what the post-doc cohort in particular would find most useful.

A number of diversity events have been organised, including an unconscious bias training event attended to capacity (25) by staff. It received a very positive response and another round of training has been organised for May 2015. We have also worked to establish better links with other SEPnet institutions through a mailing list and a face-to-face meeting of Juno committee members, organised by QMUL, that has been very beneficial in understanding statistical trends and sharing best practices.

Significant effort has been invested in improving the clarity and visibility of School policies, which are now clearly documented on the School website. Full engagement with Juno is now part of the school strategic plan and a number of additional policies including one supporting female academics on maternity leave with extra post-doc funding have also been established.

Since achieving Juno practitioner status we have focused on embedding data collection and analysis practices, obtaining data sets from central University services where possible supplemented with statistics collected in-house broken down by research group. We have been asking the relevant people and committees to analyse and understand the statistics relevant to their remit. For example, Juno committee members have attended meetings of the Recruitment, Teaching and Graduate Degrees committees in order to deliver the statistics and encourage investigations into anomalies etc. By ‘tying up’ these links between the different committees we are working towards a more encompassing model, with joint responsibility for diversity issues across the whole school. These actions also help to ‘future proof’ Juno work by distributing the responsibility across the various committees, and thus not dependent on one of two staff members (e.g. actions will continue with change of Head of School
or Juno Chair). We have been implementing standard agenda items to ensure the actions and data analysis are addressed at regular committee meetings.

We have also been developing School tools, such as a PhD student database, undergraduate attendance and grade monitoring, and staff roles and training records, to include gender fields. In all cases we have specifically included three gender fields: Male, Female and a 3rd category to include transgender, although we do not present any analysis from this 3rd category due to the very low numbers involved. From this year, all course module information (attendance and coursework submission and grades) will be available in a gender disaggregated form to all Module Organisers (MOs). To ensure that each MO and the teaching committee review these data, a standard template has been written for input to the end of year module reviews, in which MOs and the teaching committee review the success of their taught modules, including student feedback, grades etc.

We feel we have made significant progress on the actions detailed in our Juno Practitioner application, and have included an annotated version of the Practitioner Action Plan in Appendix 6 (separate document). A number of new actions have evolved based on more detailed work, and where possible we have reflected on existing actions, setting more specific and measurable goals based on the statistics we have collected. We realise this is a continual process, and aim to evolve a number of the new actions in our Juno Champion action plan to be more specific once we have reviewed the relevant data.

Recent staff survey data shows that the staff morale is high, and qualitative responses towards our Juno actions are generally very positive. We realise that there is more work to be done, and have set a number of aggressive actions (included in Appendix 7 and referenced in blue text in this report) for the future to drive the gender and diversity agenda forward within the School, but are proud of the progress made, which we detail in this report.
3. Discussion of the Five Principles

3.1 Principle 1: Robust organisational framework

The School is strongly committed to the Juno process, reflected by wording in the new school strategy document[1]:

“....To embed best practice in diversity, gender and family friendly policies by fully engaging with schemes such as Juno and Athena-SWAN.”

The Juno committee currently consists of 12 people, drawn from all research groups and academic grades within the school. Membership is reviewed at each Juno committee meeting in particular to ensure good student and post-doctorate representation as these roles change on a shorter term. We specifically require an academic from each of the four research areas as this was found useful for ensuring continuity across the groups (Action 1.1.1a). We also invite a member of the University’s HR diversity team to join our meetings. The current committee composition is given in Table 1 indicating each member’s position and research group.

Table 1: Composition of the Juno Committee.

<table>
<thead>
<tr>
<th>Member</th>
<th>Role in School</th>
<th>Research group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeanne Wilson</td>
<td>Juno chair, Senior Lecturer</td>
<td>PPRC</td>
</tr>
<tr>
<td>Steve Lloyd</td>
<td>Head of School, Professor</td>
<td>PPRC</td>
</tr>
<tr>
<td>Marcella Bona</td>
<td>Athena Swan representative, Lecturer</td>
<td>PPRC</td>
</tr>
<tr>
<td>Richard Nelson</td>
<td>Director of AU, Professor</td>
<td>AU</td>
</tr>
<tr>
<td>Sarah Cowls</td>
<td>School Manager</td>
<td></td>
</tr>
<tr>
<td>Brian Wecht</td>
<td>Senior Lecturer</td>
<td>CRST</td>
</tr>
<tr>
<td>Anthony Phillips</td>
<td>Lecturer</td>
<td>CCMMP</td>
</tr>
<tr>
<td>Ryan Terri</td>
<td>Research Associate</td>
<td>PPRC</td>
</tr>
<tr>
<td>Lucie Bone</td>
<td>Student Support Officer</td>
<td></td>
</tr>
<tr>
<td>Zac Kenton</td>
<td>PhD Student</td>
<td>CRST</td>
</tr>
<tr>
<td>Sophia Goldberg</td>
<td>PhD Student</td>
<td>AU</td>
</tr>
<tr>
<td>Marcia Williams</td>
<td>Interim Diversity Specialist</td>
<td>HR (QMUL)</td>
</tr>
</tbody>
</table>

Jeanne Wilson and Marcella Bona are also members of the University Athena SWAN self assessment team (SAT), attending meetings and sharing practices and findings with other Schools who are applying for Athena awards (Practitioner Action 23). Each School is represented on this University Committee, which meets every 2-3 months and has become a useful forum for progressing actions and escalating issues of concern in relation to gender equality. Jeanne Wilson has also been appointed to a new college-wide diversity committee (established October 2014) to address specific diversity issues.

There is a school email list ([spa-Juno@qmul.ac.uk](mailto:spa-Juno@qmul.ac.uk)) for communication within and to the Juno committee, which is promoted on our websites. The committee meets roughly every three months and meetings are minuted and posted to the internal Juno website. Doodle polls are conducted to find the best time for each meeting, accounting for the
other commitments of members. In addition, we prepare bi-annual summary presentations of key statistics and findings that are also posted on the intranet and presented at termly staff meetings.

**SCHOOL OF PHYSICS AND ASTRONOMY – COMMITTEE STRUCTURE**

Figure 1 shows the organisational structure of the School. Each committee reports to the Senior Management Team (SMT). Juno actions are a permanent agenda item at SMT Meetings and have been added to other committee agenda templates to ensure regular attention. The Juno Chair meets monthly with the Head of School to report on Juno items to be addressed by the SMT or other committees.

We have established a Juno budget for diversity events (£2000 per year) within the school, which is used to cater for Juno events, forums and discussions, and has also provided funding for members of the School to attend external events, including an event for graduate students at Southampton for international women's day and the undergraduate women in physics conference. (Action 1.1.3) We have also increased engagement with the University WISE group, contributing to and promoting their events, and also external diversity events, within the School. Two members of the Juno committee (Marcella Bona and Sophia Goldberg) are actively involved in the WISE committee and feed back suggestions from the Juno committee such as possible physics speakers etc. The Head of School directly emails staff promoting events.

We have now established a PhD forum to bring the PhD student community within the School together and provide a voice for anonymous feedback to School management on issues that may concern PhD students in particular. Previously, it was felt that there was good communication between PhD students within each research group, but not across the four different disciplines. Perhaps for this reason, we had some initial difficulty getting this forum up and running. We asked two volunteer graduate students to initiate the forum, but it proved difficult to engage all groups; hence on the second attempt we invited representatives from each of the separate research groups with more input from the Director of Graduate Studies, the Student
Support Officer and the Juno chair to start the process. A set of questions were drawn up to guide discussions in these meetings and the Student Support Officer took on the role of leading the discussion and collecting responses. The Juno budget was used to provide catering for forum meetings. A very positive response was received from the first forum: the students appreciated the chance to speak up and interact within their cohort, and a range of requests, feedback and complaints were received. The Student Support Officer distributed the comments to the relevant committees and responses and actions have been recorded on a “You Said, We Did” style webpage. The forums are planned to run on a termly basis with a target of at least 50% of active graduate students attending. (Action 1.1.2d) Example actions as a result of this process include:

- Extra training for ancillary teaching requested. An additional session provided in January 2015 received good feedback from those who attended.
- Students pointed out that the payment for ancillary teaching was less than that in other Schools or Universities. The pay structure for markers and demonstrators has been reassessed.

Following the success of the Graduate student forum, we have rolled out a similar model for the post-doctoral cohort. The School Manager offered to act as facilitator to pose questions and collect feedback from the discussions, and a post-doc volunteered to organise the sessions. The first was held in January, attended by 10 Physics postdocs (from PPRC, Astronomy and Strings; CCMMP has fewer postdocs, mostly working off site) over lunchtime, with pizza and drinks funded through the Juno budget. Feedback reported some useful discussions about developing coding skills and applying for fellowships, amongst other things. In the first forum the post-docs were asked to consider specifically how the appraisal process could be improved for them, what careers support could be useful, and how we could help them to develop their coding skills.

One issue raised was the barriers in place for post-docs to use central careers services since they do not have online access to the facilities without a student ID. The Head of School is raising this issue with the careers service and senior management. (Action 3.1.3e) The feedback is being distributed to the relevant groups and a separate “You Said, We Did” section of the Juno website is used to report back on actions taken. We plan to run these forums termly, with a second held on the 22nd April 2015, and we are taking actions (via the Head of Group) to encourage CCMMP post-docs to participate too, with a target of at least 50% of postdocs attending. (Action 1.1.2c)

We have also established “women’s lunches” as a forum for networking amongst the females in the school and a mechanism to collect feedback from this cohort. Again, we aim to hold these events termly, after positive feedback was obtained from the first session from women appreciating the networking aspects, and a target of 50% attendance from the female cohort has been set. (Action 1.1.2e)

Our Juno web pages, which we established during our Juno Practitioner work, both public (http://ph.qmul.ac.uk/engagement/project-juno-and-school) and staff intranet (only accessible to staff) have been significantly enhanced and are being continually updated with relevant information, including meeting minutes and summary presentations as mentioned above. We have also adopted the use of shared folders to distribute and archive all Juno data and documents within the committee. Ryan Terri is
In addition to the QMUL–wide policies in support of equality, flexible working, a generous maternity package and access to an on-site nursery with discounted rates, the SPA have implemented a number of school specific policies to enhance the working environment and support excellence from all members of the school.

The School supports Flexible Working for all staff and facilitates this by requiring meetings to be held within core hours (10am–4pm). Professional Staff are able to adjust their daily hours by arrangement with their line managers and academic staff organise their own time as appropriate around teaching or administrative commitments.

We are also proud to offer our MaternityPlus initiative: supporting female academics taking maternity leave for the first time in their role with up to 15 months funding for a Research Associate. As well as continuing the day–to–day research, the Research Associate will help with postgraduate supervision, maintain contact with collaborators, keep abreast of developments in the field and assist the academic in returning to work after her leave. All staff returning to work after a prolonged period of absence, and new academics, will be given lighter teaching and administrative loads and other factors are also considered (eg. priorities requests for PhD studentships).

We take a strong interest in the professional development of all staff members. In addition to participation in the QMUL–wide appraisal scheme, all academics are offered one–to–one meetings with the Head of School and assignment of a mentor in addition to their line manager. Staff are encouraged to continue their professional development throughout their career and School will provide funding for all reasonable requests for training courses etc. New academics are also required to pass the Postgraduate Certificate in Academic Practice (PGCAP), and are supported by a lighter teaching load and dedicated probation mentor as they work towards this award offered through the Centre for Academic and Professional Development.

The School operates a Workload Allocation Model, which is regularly reviewed to ensure all staff are fairly credited for their teaching and administrative efforts.

Staff surveys have provided the bulk of the qualitative data in this report, although we have gathered valuable information from discussions with the group heads, interactions with various school committees and groups and also through discussions following Juno events and presentations at staff meetings. A School staff survey was conducted in January 2014 (previous survey December 2011). We used relevant questions selected from a standard survey prepared by HR using the SurveyMonkey tool. HR personnel then summarised the responses for us to preserve anonymity of respondents. Both the Juno chair and the Head of School emailed staff to encourage take up of the survey and a total of 77 responses were received from staff and PhD students, constituting ~43% of the School.

A University staff survey was conducted at the end of 2014, in which 61 out of 90 staff in the school responded (PhD students were not included in this survey). Although the questions did not align directly with those asked in the SPA January 2014 survey, sufficient information could be obtained and we decided to focus on achieving a high response rate to this survey rather than overloading School members with an additional physics-only survey. At 68%, this is the best response rate achieved so far; it appears that the approach of explaining the benefits of responding, and beating other Schools response rates, through emails from the Head of School and Groups is effective. (Practitioner Action 25)
We have also worked hard to embed data collection procedures, collecting data in a standard format wherever possible, and arranging an annual cycle for data collection. In particular, responsibilities for analysing data has been delegated to the relevant groups and committees where possible, so that those responsible for generating statistics (e.g. Admissions tutors) are aware of any biases that could result in the procedures they are overseeing. For data collected within the School (for example, staff numbers) we have made use of the School database, adding a gender field, such that CSV files can be generated automatically and plotted using standard Excel tools.

The School has provided support for the Juno analysis efforts in the form of paid graduate time (25 hours to date).

Table 2 summarises the data sets collected and analysed by the school and indicates how and when they are obtained and who is responsible for analysis. It also indicates the relevant files that are stored in our shared folder area.

**Table 2: Collected Data Sets for Juno.** The final column gives the files and location of data and serves as a useful reference for the Juno committee.

<table>
<thead>
<tr>
<th>Data Set</th>
<th>Time Frame</th>
<th>Provider</th>
<th>Analyser</th>
<th>Relevant Files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student numbers (UG, PGT, PGR)</td>
<td>Annually in Jan/Feb</td>
<td>Strategic Planning Office</td>
<td>School Manager, Juno chair</td>
<td>SPA with 201314.xlsx, SPA_students_planning_2014.xlsx</td>
</tr>
<tr>
<td>IUG Recruitment</td>
<td>Annually in Jan/Feb</td>
<td>Strategic Planning Office</td>
<td>UG Admissions tutors</td>
<td>SPA_students_planning_2014.xlsx</td>
</tr>
<tr>
<td>PGR recruitment by group</td>
<td>Feb/March</td>
<td>Group PhD Admissions tutors</td>
<td>Brian Wecht</td>
<td>PhDRecruitment.xlsx, -&gt; PhD database</td>
</tr>
<tr>
<td>By School</td>
<td>Annually in Jan/Feb</td>
<td>Strategic Planning Office</td>
<td>Brian Wecht</td>
<td>SPA_students_planning_2014.xlsx</td>
</tr>
<tr>
<td>Staff recruitment</td>
<td>October</td>
<td>IT Reporting Services Team via HR</td>
<td>Richard Nelson</td>
<td>AllDataForBertille_Byschool_2010-Mar14_FINAL.xlsx</td>
</tr>
<tr>
<td>Shortlisting and Interviews</td>
<td>Each Juno meeting</td>
<td>Recruitment officer</td>
<td>Juno Committee</td>
<td>RecruitmentPanels.xls, Shortlisting forms (Appendix 1)</td>
</tr>
<tr>
<td>Seminar Data</td>
<td>Termly</td>
<td>Marcella Bona, through online seminar pages</td>
<td>Marcella Bona</td>
<td>SeminarsX.cc (X = group)</td>
</tr>
<tr>
<td>-------------</td>
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<td>---------------------------------------------</td>
<td>--------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>PASS (student mentoring) attendance</td>
<td>Termly</td>
<td>PASS student organisers</td>
<td>PASS student organisers</td>
<td><a href="https://docs.google.com/spreadsheet/ccc?key=0Aq_AwhlN23XDdHZDOGZWeDHKRWRFdueW1kQmxYUWc&amp;usp=sharing#gid=0">https://docs.google.com/spreadsheet/ccc?key=0Aq_AwhlN23XDdHZDOGZWeDHKRWRFdueW1kQmxYUWc&amp;usp=sharing#gid=0</a></td>
</tr>
<tr>
<td>UG Progression and Marks</td>
<td>Annually in Jan/Feb</td>
<td>Strategic Planning Office</td>
<td>Anthony Phillips</td>
<td>SPA_students_planning_2014.xlsx</td>
</tr>
<tr>
<td></td>
<td>After July Exam board and Course review day</td>
<td>Exam Board Teaching Committee</td>
<td></td>
<td>Exam board reports Module summary forms (from 2015) UG PRIZES IN SPA12-14.docx</td>
</tr>
<tr>
<td>PG Progression by group</td>
<td>Termly</td>
<td>Research and PhD Officer</td>
<td>Graduate Degrees Committee</td>
<td>Collated supervisor reports -&gt; PhD database summer 2015</td>
</tr>
<tr>
<td>For school</td>
<td>Annually in Jan/Feb</td>
<td>SPO</td>
<td></td>
<td>SPA_students_planning_2014.xlsx</td>
</tr>
<tr>
<td>Staff Promotions, Career breaks, Flexible working and sabbaticals</td>
<td>Termly</td>
<td>Head of School</td>
<td>Head of School</td>
<td>Promotions_Summary_JW.xlsx</td>
</tr>
<tr>
<td>Staff newsletter</td>
<td>Termly</td>
<td>Head of School</td>
<td>Head of School</td>
<td>Newsletter_Gender.xlsx</td>
</tr>
</tbody>
</table>

The University diversity specialist has been a very valuable point of contact, in particular, in lobbying the various college units responsible for data collection towards a coordinated effort to provide the statistics required on a school-by-school basis. This process has not been straightforward, as explained below, but there has been a clear shift in attitude and the University is now establishing teams and databases that can provide the required statistics in a useful format and should do so on an annual basis in the future.

An important action in our Practitioner plan was to embed data collection procedures. The Strategic Planning Office (SPO) now provides the student data, covering recruitment, enrollment and progression. The time frame is dictated by the following cycle:

- Enrolment data is extracted each year from the HESA student return to ensure it lines up with the data that becomes available publicly.
- The student return undergoes validation until early November and is then signed off by the Principal in mid-November.
- Due to statutory funding returns in December the update of the gender equality data is scheduled in January/February each year.
• Benchmark data usually becomes available in April.

Examination of the provided data has been performed by the recruitment committee and presented to the Juno committee for further discussion. To initiate this process, the Juno chair attended a recruitment committee meeting to present the current status and possible avenues of investigation. Due to the challenges of obtaining this data, analysis was previously carried out when available, but now that the data collection is more embedded, we aim to schedule Juno committee meetings around the data schedule (full data not yet obtained for 2014/15). To follow up on some aspects of this study, we obtained more detailed information on undergraduate admissions through a special data request to the MySIS QMUL online student database and employed a graduate student to help with the analysis (funded through the Juno budget). (Action 1.2.1b) The undergraduate student data is presented in section 4.5.

Formally, the school recruitment officer collected staff recruitment data until 2011 when recruitment transitioned to the iGrasp database, a central university system. Unfortunately, it was not possible to query this database for gender disaggregated data broken down by school, thus despite numerous requests, not only from our School, we did not have access to this data for three years. In October 2014 the University established a new IT Reporting Services team and started planning a replacement for iGrasp that would allow Schools to schedule their own data requests. SPA members have tried to feed into this process to ensure the delivered system meets our requirements. (Action 1.2.1a) In the interim, a QMUL team was established to sort the existing database queries into the required format (first available October 2014), and within the School we have drafted forms to collect data at the time of shortlisting and interview (see appendix 1) such that data can be reviewed for each hire, and intervening action can be taken if required. Examination of staff recruitment data has been performed by Richard Nelson and is presented in section 4.2.

Apart from these two large, University provided data sets, we have tried to shift to a paradigm where those actively involved in a process are responsible for analysing the relevant data, as it is felt that this will further embed the principles of Juno throughout the School’s activities. For example, we now ask each research group’s seminar organiser to collate data on seminar speakers on a termly basis, and final analysis is performed by Marcella Bona (PPRC seminar organiser and Juno committee member) and is presented in section 4.7.

For PhD recruitment, two members of the Juno committee are responsible for their group’s PhD recruitment cycle, Brian Wecht (CRST) and Jeanne Wilson (PPRC) so they coordinate discussion of the data collected at meetings of the Graduate Degrees Committee. The PASS scheme (Peer Assisted Student Support) has been running successfully in the School for the past 4 years and is now well embedded. It is organized by students for students with a small amount of academic coordination and promoted to all 1st and 2nd year students. The student organisers collect and monitor gender statistics on all attendees and mentors at the weekly PASS mentoring sessions, which are entered into a Google spreadsheet shared with the Juno committee. (Practitioner Action 11) Since all requests pass through the Head of School, and due to the possible sensitive nature of this data, the Head of School takes responsibility for
collecting and monitoring the data on flexible working, promotions, caring leave and sabbaticals.

In 2014, a gender field was implemented in our SMP (Student Monitoring Program) database, allowing all module organisers to review data on attendance and coursework marks by gender. (Action 1.2.1g) In order to ensure that module organisers (MOs) review and act upon any biases in data for their modules, a template form has been established that MOs must submit for the course review day, held at the end of each academic year. (Action 1.2.1h) The teaching committee will be asked to consider these data and report to the Juno committee, starting this year. The Juno committee also have access to exam board reports, which are analysed following the meeting of the exam board in July each year. (Action 1.2.1j) This student progression data is analysed by Anthony Phillips for the Juno Committee.

3.1 Principle 2: Appointment and Selection
All members of interview panels for staff and academic roles are required to attend the University half-day course on “Fair Selection and Interview Skills” run through the Centre for Academic and Professional Development (CAPD). We are also strongly encouraging all staff to attend an Unconscious Bias training session (see section 3.4).

Wherever possible, we aim to include a female member of staff on interview panels (not always academic due to the pressure this places on a small number of female academics within the School) and at least three people with a broad range of skills applicable to the role. The Recruitment Officer, Jazmina Moura coordinates the selection process, collating details from the shortlisting process, inviting selected candidates to interview etc. Interviews for a given post are carried out on the same day, or consecutive days and final decisions are made either on the same day as interviewing or the following day. Although full gender information is not available to us at this stage, gender is often apparent through candidate names and CVs, and the shortlisting committee will be asked to specifically comment on the gender ratio of the shortlist with respect to applications. (See appendix 1 – shortlisting form). We are liaising with the University central services such that gender information can be extracted from future recruitment databases in ‘real-time’ such that we can formalise an action on the recruitment officer to check the gender ratio of each shortlist and refer cases with a >10% discrepancy with respect to the ratio of applicants, or all male-shortlists to the Head of Group and Head of School for further consideration. (Action 2.2.1c)

In combination with qualitative data from various staff recruitment exercises between 2012-2015, collated across the different research groups, we have found that the percentage of female candidates for permanent lectureship positions typically lies between 12-20%, with the fraction of shortlisted candidates who are female being consistent with these figures. A similar picture emerges when looking at the data on PDRA recruitment, where the data are perhaps more informative because of the larger numbers involved. Here we find similar percentages of female applicants and shortlisted female candidates to those described above, and we also find that the fraction of the appointed candidates who are female matches closely the fraction of female applicants. There is also evidence that the fraction of female research staff in the School may have been increasing in the last three years. The data on recruitment of
non-academic staff into office administration and outreach roles shows that approximately 60% of the applicants are female, with the numbers of female staff who are appointed being somewhat larger than this.

One area where we need to improve our data collection is to provide information on the recruitment statistic at the research group level, and this will be a priority for the future. There is no evidence at present (on admittedly sparse data) that our shortlisting procedures are acting as an impediment to the female applicants. Given the high ratio of females appointed to non-academic roles, we have implemented an action to specifically review shortlists for these roles for biases against male candidates. (Action 2.2.2a)

In September 2014, after reviewing our standard job advert template, and consulting with other schools and HR, we decided to change the wording in our job advertisements to include the following:

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“QMUL values diversity and is committed to equality. The University holds an Athena SWAN bronze award and the School of Physics and Astronomy holds IoP JUNO Practitioner status and is actively working towards the JUNO Champion Award. As part of the School’s participation in the JUNO programme we strongly encourage applications from women.”
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We also promote benefits including the pension scheme, season ticket salary sacrifice and on site subsidised childcare in our job adverts. We have implemented a standard policy for the recruitment officer to distribute all adverts for new posts to the full School mailing list (graduate students and above) and post adverts on the School website. (Action 1.2.3c) Early indications from our studies with Google analytics show that this jobs page is being well used and is one of the key places from which people follow links to our Juno site. It is hoped that even if members of the School are not considering applying for a post, they may know of suitable candidates through their various collaborations, and emails are worded to encourage the distribution of these advertisements, especially to under represented groups. Furthermore, we are working with HR to implement review of our job descriptions by a diversity specialist, to advise on alternatives to language and descriptors that could be considered gender specific. (Action 2.2.2b) The Head of School also highlights vacancies in his monthly newsletter.

We invited a member of HR to sit in on the interview process for a recent lectureship appointment, to gain feedback on any possible biases in the processes (none were observed) and plan to repeat this exercise periodically to ensure the process remains fair. (Action 2.1.1c)

During the recent recruitment of a lecturer in Astronomy, a decision was made to try to address the very poor number of female academics within the Astronomy Unit. Significant efforts were made to contact female potential candidates by alerting them to the job advert through personal emails. The recruitment process was successful in attracting a number of high quality female candidates, and led eventually to the appointment of a candidate who is female. Particular efforts were made during the post-offer negotiation phase to secure the signature of the candidate, and the School adopted a more generous than usual stance on the issues of salary, start-up package
and start date, motivated by the quality of the candidate and to a large degree by the
desire to address the gender balance among academics in the Astronomy Unit, and in
the School more generally. We will encourage the CCMMP and CRST groups to consider
similar actions for future hires in these groups. (Action 2.2.2c)

One of the main issues highlighted in the January 2014 staff survey was the need to
improve the staff induction process. (Practitioner Action 26) Based on this we have
prepared a staff induction checklist and webpage, (see appendix 4) which is given to all
new starters. Completed checklists and feedback are collated in order to improve on
the information provided in the future. This has been in place since July 2014. (Action
2.1.3a) We have set a future action to develop a version of the induction checklist
appropriate to graduate students.

3.3 Principle 3: Career progression and promotion

All staff members are required to participate in the QMUL-wide staff appraisal
scheme, which was reworked in 2012-13 following a review of the existing system. The
appraisal operates on a yearly cycle with a set of forms to be filled in and agreed upon
by appraiser and appraisee. The same paperwork is used the following year such that
outcome of planned actions can be reviewed.

This is implemented in the School through the following structure:
The School executive officer monitors the process to ensure uptake, which is
essentially 100%. The Head of School appraises all heads of group and professors, each
head of group appraises the other academics within that group and academics appraise
post-docs for whom they are line managers. Professional Services staff are appraised
by their own line manager.

Qualitative feedback on this process was collected through the QMUL-wide staff
survey in December 2014. The responses from the School of Physics indicated that only
61% of staff felt the appraisal process was useful, slightly lower than the QMUL-wide
average response to this question. One criticism was that the scheme is not tailored to
the specific needs of the School and that in some cases it would be more useful to be
appraised by somebody other than the line manager – for example where a post-doc
works closely with just their line manager on a day-to-day basis. For the next round of
appraisals we are establishing a task force that will attempt to draw up some pointers
specific to the School to ensure useful information is imparted and shared, and to try to
ensure consistency and best practice across all appraisals. (Action 3.1.1a) We have also
polled SPA members via an anonymous web form for their opinions on the merits and
failures of the current system and how it may be improved. Given the positive response
from academic staff to the 1-2-1 meetings conducted yearly with the Head of School,
we asked the post-doc cohort, through the post-doc forum, if they felt a similar scheme
would be useful. The post-docs liked this idea, so we are rolling out annual 1-2-1
meetings between the post-docs and senior academics. Long-term RAs, essentially
permanent posts, will meet with the Head of School, whilst temporary (i.e. <4 year)
posts will be assigned to one of four senior academics – one selected from each
research group, such that the post-doc and interviewer are from different research
groups. (Action 3.1.1b)
The School workload allocation model was redesigned before our Practitioner application and is now well embedded. All roles are assigned a number of hours in this model, and School management is open to feedback in order to adjust inappropriate allowances or incorporate new roles. As an example, chairing the Juno committee is now assigned 150 hours per year (previously 50) within the model (total hours per year = 1650 hours) and the deputy is assigned 50 hours. The system has now been migrated to a central University system called SWARM, which all staff can access using their university login, to see and approve their own allocations. The Head of School reviews each academics workload with them during the annual 1-2-1 meetings. The allocation of key roles within the school and the relevant number of hours assigned are also listed on the School staff intranet for transparency and convenience. There have been situations where the model has needed to be adjusted to allow for exceptional circumstances, for example sensitive issues that should not be broadcast to the whole School but need to be taken into account when assigning tasks. Therefore, a “Family Remission” category has been added to the workload model to be assigned at the discretion of the Head of School.

QMUL encourages mentoring as a dynamic way of facilitating the personal and professional development of individuals to enable them to achieve their full potential as explained at http://www.hr.qmul.ac.uk/workqm/develop/Mentoring/index.html. Previous staff surveys have indicated that the staff strongly in favour of a mentoring scheme, out of those that completed the survey, were all female so we focused efforts on engaging with the University-wide Women's mentoring scheme. Given the small number of female academics within the School, this is a more viable option with a larger pool to select suitably matched mentors and mentees. A pilot scheme was run in 2012-13, with one member of the School involved as a mentee and the School actively promoted the 2013-14 round of this scheme, this time with involvement from SPA members at mentor and mentee level.

Our data show that the proportion of female PDRAs is small, and there is a clear “Leaky Pipeline” trend in our female ratio at increasing academic level. Therefore, we considered actions that would help the post-doc cohort in particular. We acknowledge that a small fraction of the current post-doc cohort responded to the January 2014 staff survey, and based on feedback from the post-doc forum we realise that there may still be a need for mentoring at the post-doc level, not covered by other schemes. Therefore, we are working to formalise a mentoring scheme for all new starters and others wishing to opt-in within the School, (Action 3.1.2d) with the help of Rui Martins who is responsible for a post-doc mentoring schemes in another faculty at QMUL (School of Engineering and Materials Science). To ensure that the scheme meets the needs of the School, we arranged an introductory session for prospective mentors and mentees on 19th March 2015, where a general introduction to mentoring was presented and a discussion held on what people want from the scheme. 5 postdocs and 2 academics attended the session where methods for assigning mentors, and what people would want to learn from the scheme were discussed. Based on this feedback, a mentor request web-form was established (Appendix 2 – mentor web form) to collect the relevant information for mentor assignment. Given the small numbers of prospective mentees – so far two post-docs have completed the request form – it was decided that the School Manager and Head of School would review mentor requests and approach suitable academics as mentors. If suitable mentors cannot be found within the school,
Rui Martins will act as facilitator to find matches within the University. Once suitable mentors have been assigned, Rui will provide a short training event for mentors and mentees together.

Moving forward, every new member of staff will be asked to fill in the mentor request form and assigned a mentor as part of the induction scheme (see below), and training will be provided periodically for mentors. Furthermore, any existing staff member can ask to be assigned a mentor at any time, via the web form, and this opportunity is advertised through the mentoring policy and was promoted at staff meetings. A field has been created in the school database to store the mentor assignments so that we can keep track of take-up and ensure the responsibilities are fairly distributed. We will monitor the uptake of this scheme qualitatively through a short web form that will be distributed to mentors and mentees periodically. This mentoring is in addition to a dedicated mentor for staff on probation that has been in place for many years.

There are a number of mechanisms in place to support teaching within the school, including a detailed start-guide on the staff intranet, a peer observation scheme in which all teaching staff both review another lecture and have one of their own teaching sessions observed, and subject review days with the teaching committee. In the subject review days, each course is discussed with the module organiser, taking into account student achievement, engagement and student feedback (formally collected through a mid-course survey). This provides a forum to share best practice and make necessary adjustments to courses and teaching styles.

The QMUL Centre for Academic and Professional Development (CAPD) provides a series of events throughout the year, many dealing with career development (https://www.esdcourses.org.uk/userlistcourse.php). Appropriate events are promoted by email throughout the school. Additional QMUL events such as research funding events and fellowship days run by the research services office are also widely promoted, especially to PDRAs. The QMUL WISE group also run a number of events focused on the specific career challenges for females, generally aimed at PDRAs. Members of the school have actively engaged in these events as speakers or recommending suitable external speakers, and they are actively promoted within the School (emails and posters). There are additional opportunities for graduate students provided through the SEPnet GRADnet scheme, including careers advice and employer engagement events and training courses such as scientific writing and CV workshops, which are currently promoted via email and we aim to promote more strongly via the graduate and post-doctoral forums. (Action 3.1.3a)

Our outreach officer has worked to actively identify staff, to apply for awards such as the Royal Society Rosalind Franklin award and the IoP Very Early Career Woman Physicist award. The Head of School also actively encourages suitable individuals to take-up specific training such as the QMUL Women into Leadership course, and each year an academic is put forward to participate in the QMUL High Potential Leaders course. So far, 2 female and 2 male academics and a female staff member have participated in this residential scheme. Since attending this programme one of our female academics has gone on become Head of the PPRC Research Group and UK spokesperson of a major international research collaboration.
There is an annual promotions round at QMUL, in which staff can put themselves forward for promotion by completing a standard set of forms. The criteria for promotion at each level are documented and staff can choose to apply on the grounds of their research, teaching, or both. ([http://www.hr.qmul.ac.uk/acadreview/](http://www.hr.qmul.ac.uk/acadreview/)) The promotions rounds are clearly advertised to all faculty members and promotions workshops organized by the university before each round are heavily promoted. A School promotions panel, consisting of the Head of School, the four Research Group Heads plus the Director of Teaching and Learning meets to prepare supporting statements for each promotions candidate within the School. Following the 2014 promotions round, encouraged by the Juno initiative, the Head of School has compiled a spreadsheet tracking the career progression of each faculty member since 2000 in order to identify candidates who may be due for promotion and who may not put themselves forward. This spreadsheet was circulated to the Heads of Groups prior to the application deadline in order for them to encourage people to apply. An anonymous example of the spreadsheet is shown in Figure 2.

![Figure 2: Example of a section of the spreadsheet to allow easy identification of candidates who should be encouraged to apply for promotion.](image)

Despite this intervention, there was no observed increase in promotions applications in 2015, with 2 applications submitted to the School, the lowest number since our records began (2010). We will aim to address this through explicit promotions discussions in the 2015 appraisal round and 1-2-1s with the Head of School.

Using the full spreadsheet, the average time spent at lecturer, senior lecturer and reader level before promotion (using data only on those that have advanced) is found to be $4.2 \pm 1.9$, $3.6 \pm 0.6$ and $4.1 \pm 1.4$ respectively. Therefore, taking a rough average time at any given grade to be approximately $4 \pm 2$ years, we can expect that $80\%$ of staff advance from their current grade within 6 years. Out of the 31 non-professorial full time academics, the average time in current role is $4.5 \pm 3.4$ years, with $23\%$ in their current role for $>6$ years. Therefore, we set a target that $<20\%$ of staff remain at the same grade for more than 6 years. (Action 3.2.3a) To achieve the goal stated above requires an average of 4.1 successful promotions applications per year, so with a 50% expected success rate we should be encouraging at least 8 academics, on average, to apply for promotion each year. The current average is $\approx 6$ applications per year. There are obviously a number of factors affecting this – time of recruitment etc. – so these goals are set for an average over 5 years. (Action 3.2.3a)

Another recent action has been to establish a procedure for conducting exit
interviews within the School. (Practitioner Action 28) A form has been designed for leavers to fill in during discussions with their line manager prior to departure, although we have also allowed a mechanism whereby the forms can be sent direct to the Juno committee for more confidential treatment. (Appendix 3 – exit form) We plan to start collecting exit information from graduate students too. In particular, information from those leaving for other positions, alternative career paths etc. would help us to give career advice to the existing graduate and post-doc cohort, especially if leavers are willing to be contacted in the future. (Action 3.1.3f)

3.4 Principle 4: Open and Inclusive culture

We are proud of the atmosphere and working environment we achieve in the School. In both the 2011 and 2014 QMUL-wide staff surveys, the School has scored well on staff satisfaction questions. In the 2014 survey, 61 out of 90 staff members asked completed the poll and the School scored consistently higher than the university average and also the Science and Engineering faculty average on questions related to the quality of work experience (in 15/23 questions the School was grade >10% higher than the University average). For example, 97% of respondents said they “Felt part of the School” and 95% agreed that “My motivation at work is generally high”.

We are proud of these responses, which show definite progress since our Juno Practitioner application, as the intention is that all members feel a part of the School and enjoy a friendly professional environment. These desires influenced the G O Jones building renovations, with open spaces for socialising and discussions with whiteboards and tea and coffee making facilities on all floors. Each group occupies a separate corridor in the building with students and post-docs sharing large open plan offices with their group peers. There are dedicated meeting rooms for seminars and events that form an integral part of each group’s calendar and the ‘museum’ meeting area on the first floor is available for social gatherings, events and study sessions for undergraduates. We give a flavour of interactions within each of the four research groups here.

AU:

The Astronomy Unit (AU) holds weekly seminars on Fridays between 2:30pm-3:30pm, where external speakers present their latest research results. All staff and PhD students are expected to attend. The seminar is preceded by lunch with the speaker, which is moderately subsidised for staff (PDRAs and lecturers) and heavily subsidised for PhD students. The seminar is followed by an hour-long coffee & cake event, where members of the AU socialise among themselves and with the speaker. The Cosmology group within the AU runs the London Relativity and Cosmology seminar series on Wednesday afternoons. This is preceded by a coffee & biscuits session, and is followed by a subsidised dinner with the speaker that all seminar attendees are encouraged to go along to. The PhD students within the AU run their own seminar series on Fridays. Members of staff do not attend these seminars, which provide an opportunity for PhD students to present their work to their peers, and to practice their presentation skills. Students that attend these are entitled to one free drink in the university bar as a means of encouraging them to socialise on Friday evenings. Each of the sub-groups within the AU run their own hour-long journal clubs or discussion group sessions, which are a particularly useful way of encouraging interaction between students and staff at all levels of experience in an informal setting. The AU runs semi-formalised
Astronomy coffee sessions on Tuesday and Thursday afternoons to encourage interaction and discussion, and organises a Christmas dinner every year, in addition to other social events that are organised on an ad hoc basis (e.g. during interview days when lectureship candidates are invited for interview and to meet the group).

CCMMP:
CCMMP holds two series of research seminars, at 2 pm on Tuesdays and Thursdays, in each case meeting roughly 2-3 times a month. Tuesdays are for external speakers and are formally organised by an academic (although students and postdocs are encouraged to suggest speakers); Thursdays are for internal speakers, especially students, and are also convened and chaired by PhD students. The CCMMP group also interact with related Schools within QM Through the “Materials Research Institute”, a collaboration with its own seminar series, student training program, and regular social events. Socially, CCMMP have coffee daily at 11 am in the School Museum, and encourage all members of the group to attend regularly and to discuss their work. Each year they also hold a dinner in winter and an excursion out of London in the summer, the latter particularly being aimed at international students and staff who might not have had substantial opportunities to travel in England.

CRST:
The Centre for Research in String Theory (CRST) gives many opportunities throughout the year for faculty, staff, and postdocs to socialize. There are group dinners for all CRST members both at Christmas as well as at the end of the year, and seminar speakers are frequently taken out to dinner and to a pub, inviting all group members to join. Additionally, the PhD students host events throughout the year, such as joint seminars between the various London string theory groups, which then have social events afterwards. Finally, due to the centrally located common space, there is a lot of informal interaction between faculty, students, and postdocs throughout the day.

PPRC:
In the PPRC group, there are seminars 2-3 times per month, proceeded by tea and cake at 1:30pm on Fridays (these seminars were brought forward to fall within core hours and to ensure no overlap with other research group events). All members of the group, especially students, are strongly encouraged to attend and we aim for a good gender balance of well-regarded speakers (target>35% female – Action 4.1.5a). On a daily basis there is a general call for coffee at 11am and lunch at 1pm, where members of the group are likely to be found in the SCR. Twice per year a group meeting is held in which each project present their work to the rest of the group (academics present at the first meeting, students and postdocs at the second). The group also hold a Christmas lunch within the School and other social events are organised on an ad hoc basis.

Interaction between research groups is also strongly encouraged. School wide colloquia are held approximately once per month (currently at 4pm on Fridays but we are working to find a slot within core hours for the next academic year – Action 4.1.1a) followed by a reception with wine and nibbles. Staff meetings are held once per term, often followed by a wine reception to celebrate reported successes. At Christmas there is a buffet lunch party funded for the whole school and in the summer the physics society organise a barbeque and ball – both events open to all members. In 2014, for
the first time, the PhD students were allocated £1000 to organise their own Christmas party, in an initiative to increase interaction in this cohort across the different research groups, and £500 was allocated for a separate party for Admin and Technical Staff. Positive feedback was received from both of these events that allowed good team building. Other events are organised about special events – e.g. release of CERN Higgs discovery and the recent solar eclipse in which all members of the School are invited to participate. (Action 4.1.3)

In a recent attempt to increase the number of images of people on the School websites (Action 20 in our Practitioner Action Plan) we organised a “Physics Selfie Photo Competition” in which all members of the School except undergraduates were invited to submit a photo of themselves “doing physics” along with a short caption with the brief to illustrate how great our jobs are. (https://jasper.ph.qmul.ac.uk/photo-competition/). The full School including the undergraduate cohort were invited to judge this competition. There were 17 entries (5 of whom were female) and 193 votes cast. (Action 4.1.4a) We monitor the number of male and female images on our public webpages and currently have a roughly 50% ratio of female to male faces (except on staff pages, where images obviously follow staff numbers!)

In general we are on the lookout for successes that can be celebrated through news articles on the School website, and also within the school newsletter. One such example is the QMUL Student Union’s President’s Award that was presented to Rebecca Fickling, the PsiStar president in 2013/14. PsiStar is an active and inclusive physics society, which the majority of our students choose to engage with (current membership of 191). Our Student Support officer, and a number of academic staff who give popular science talks and attend events such as the annual barbeque and ball, support the student organisers.

Our student ambassadors play an important role within the school, helping with the organisation of events such as UCAS days and conferences, and generally representing the student body, (activities for which they are paid). In 2013/14 we had 25 trained ambassadors, 6 of whom were female, which is very representative of our undergraduate student ratios (24%). In 2014/15 we have 27 trained ambassadors, 9 of whom are female (33%).

At UCAS open days we arrange a 20-minute interview for each applicant with a member of academic staff. This not only allows us to assess their abilities but also more importantly gives the student a chance to ask any questions they may have directly to an academic. The representation of female academics is monitored: in the 2014-15 interviews 3/45 interviewers were female, which is in line with the number of available female staff.

We also monitor the gender ratio of all seminars and colloquia as discussed in section 1. The full data are included in section 4.7 and indicate fairly large fluctuations in the ratio of female speakers on an annual basis. The average fraction of female speakers over all 4 groups is 16%. Table 3 gives the averages per group for data collected since 2008 and the maximum and minimum percentages, and the year obtained for each group. We realised that there are different gender ratios for the different fields with lowest female ratios in theoretical subjects, as backed up by data
on the courses selected by our own undergraduate cohort (see section 4.1). As we continue to try to understand these biases, we decided to assign purposely aggressive targets for each group based on improving on the best past performance numbers as given in the final column of table 3.

Table 3 Average, maximum and minimum percentage of female seminar speakers per year for each of the four research groups. The final column includes the target set for each group going forward.

<table>
<thead>
<tr>
<th>Research Group</th>
<th>Average Female %</th>
<th>Maximum Female %</th>
<th>Minimum female %</th>
<th>Target annual female %</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCMMP</td>
<td>13%</td>
<td>21%(2014/15)</td>
<td>0%(2011/12)</td>
<td>20%</td>
</tr>
<tr>
<td>CRST</td>
<td>10%</td>
<td>17%(2010/11)</td>
<td>3%(2014/15)</td>
<td>20%</td>
</tr>
<tr>
<td>AU</td>
<td>17%</td>
<td>28%(2014/15)</td>
<td>0%(2010/11)</td>
<td>30%</td>
</tr>
<tr>
<td>PPRC</td>
<td>22%</td>
<td>33%(2014/15)</td>
<td>0%(2010/11)</td>
<td>35%</td>
</tr>
</tbody>
</table>

We are also trying to collect and positively influence the percentage of female speakers, and session chairs, at conferences and events organised by members of the School with goals related to the area of research – i.e. the same as the seminar speaker goals (Action 4.1.5b). The 2014 NuPhys conference (hosted by the head of PPRC) achieved nearly 30% female speakers, as was noted in the final slide of the summary talk:

We have successfully trained 30 academics and research staff in Unconscious bias through two sessions delivered by Averil MacDonald (SEPnet Diversity and Impact Lead). The first session in February 2014 was attended by 7 members of staff directly involved in recruitment and training and the second, in July 2014, was attended by 25 members of staff (full capacity) from post-doc level to Head of School. After very positive feedback we have organised a further 2 training sessions for March 2015. Records are kept of all those who have attended training, with an aim to training all permanent staff within the next 2 years. (Action 4.1.2a) The next session is booked for 13th May 2015, which is also open to student ambassadors and laboratory demonstrators. We have found that providing this training has increased awareness of diversity issues and stimulated useful conversations and ideas. We will continue to openly discuss diversity issues within the school, including a Juno report at staff meetings and written Juno updates in school newsletters.

When cases of unprofessional behaviour have arisen (a student sending inappropriate messages to peers, and offensive language from maintenance contractors) we have acted swiftly, and in line with QMUL policies on harassment etc., sending out a strong message that such behaviour is not tolerated within our School.

The SPA has a strong and varied outreach programme with a dedicated Outreach Officer employed in the School. Staff are involved in various initiatives, both activities involved in house and externally. In house examples include an annual Particle Physics Master class (March), a residential Summer Academy (July) and a Women in Physics
Taster Day for GCSE/ A level girls (June). For all events, we try to maintain a good representation of both male and female members of the School, from academic, post-doc and graduate student speakers, to the physics ambassadors helping out. External events include “Physics Pint of Science” (an outreach festival over three days [http://pintofscience.co.uk/events/london/]), “Story Collider” (public events where speakers tell stories about science, [http://storycollider.org/shows/2013-06-25]) and participation in the “Big Bang Fair” ([http://www.thebigbangfair.co.uk/Volunteers/The_Big_Bang_Fair_2015/]). The “Pint of Science 2015” events associated with QMUL have been organized by one of our female graduate students who has made a big effort to ensure there is diversity in the speakers - so that there are 50% women speaking at the event. We aim to better promote our participation in these external events by collating images and statistics on our engagement webpages. (Action 4.1.4c)

3.5 Principle 5: Flexible working

The QMUL flexible working policy is clearly linked from the staff intranet pages. Due to the nature of the majority of academic work within the School, which is often performed within international collaborations or at external scientific facilities, most academic staff work flexible hours. Staff are asked to notify the School’s Executive officer when they are working away from the University and requests for regular working-from-home days are directed through the Head of School. The chair of the Juno committee, for example works every Monday from home in order to be able to do the School run once per week. A large proportion of staff have formally requested to work from home at least 1 day per week and most others work from home or elsewhere frequently, if not on a regular schedule.

The January 2014 staff survey response indicated that 60% of male staff feel they work flexibly, whilst 79% expressed a desire to, and 75% of females work flexibly, matching the number that felt they wanted to. This could indicate that flexible working was being marketed more to women than men, suggesting we should work to ensure this opportunity is inclusive. This should be addressed explicitly in 1-2-1s with the Head of School and appraisals.

Professional staff have to be in the SPA between the core hours of 10.00-16.00 but can alter their hours around those, for instance starting at 08.00 and finishing at 16.00. People also have the option to reduce their lunch hour to 30 minutes and cut 30 minutes off their hours. This is considered as standard and pretty much every case is agreed as long as the hours are done and are done on site.

We have also considered requests to reduce staff working hours for childcare, for instance, and one staff member is currently on 0.8 FTE (full time equivalent) for this reason. These requests are considered within the QMUL flexible working policy: [http://www.hr.qmul.ac.uk/procedures/leave/flex_work/index.html]

We have occasional requests for working at home by professional staff, which are considered on a case-by-case basis but are more difficult as for a lot of the work they really have to be in the School to help staff and students etc.

Our Core Hours policy states:

School meetings such as committee meetings, staff meetings, exam boards etc are held in ‘core hours’ between 10am and 4pm in order to be as family friendly as possible. It is generally not possible to ensure that research meetings are held in core hours due to the number of external collaborators and different time zones involved.
It has been difficult to enforce this policy across the entire School due to the number of meetings that need to be fitted into the working day. In particular, the School colloquia are currently at 4pm on Friday afternoons, with a social reception afterwards, and it has not been possible to find an alternative afternoon slot that does not clash with other group seminars and teaching although this is a future action. (Action 4.1.1a)

The School has adopted a flexible interpretation to paternity leave accommodating requests wherever possible, such that the allocated 2 weeks off can be taken at the most suitable time for the father. For example, one RA’s son was born prematurely, and it was agreed with his line manager that it made more sense to take his time off when the child was brought home a couple of months later, although official paternity entitlement is a lot less accommodating. Another RA arranged to work from home following his wife’s C-section and reported “Needless to say Steve and the PPRC (and GridPP) have been fantastic in understanding and facilitating this - I feel very well-supported as I have been managing work and being a new parent.” See Appendix 5 for the full case study. In the past year, 5 staff have taken paternity leave and 3 more are planning to in the near future.

In May 2013 we initiated the SPA Maternity plus scheme (Practitioner Action 27):

| In addition to the normal maternity entitlements, the School is pleased to offer female academics on permanent full time Academic and Education (Teaching and Research) contracts the opportunity to apply for ‘Maternity Plus’. The Maternity Plus initiative will provide a Research Associate*, funded by the School, for up to 15 months to continue the academic’s research programme while they are on maternity leave. As well as continuing the day-to-day research, the Research Associate will help with postgraduate supervision, maintain contact with collaborators, keep abreast of developments in the field and assist the academic in returning to work after her leave. All staff returning to work after a prolonged period of absence will be given lighter teaching and administrative loads. |
| * The RA would only normally be provided to academics who do not already have RA support available. It would only be available for one period of maternity leave per academic. |

So far, this scheme has not yet been used, as no female academics have taken maternity leave since it was introduced, but the opportunity is explained in all new appointment adverts and advertised on our public website. We have an action to review this scheme in the near future in light of new paternity legislation. (Action 5.1.4b)
Staff taking leave for caring purposes (not just maternity) will also benefit from the ‘Returning from long term absence’ policy:

<table>
<thead>
<tr>
<th>The School recognises that staff returning from maternity leave or other long term absences may be relatively disadvantaged by this break in their research and wishes to support them upon their return so as to enable them to quickly return fully to the previous level of their research work.</th>
</tr>
</thead>
<tbody>
<tr>
<td>It will do this by:</td>
</tr>
<tr>
<td>• providing an update session upon return to ensure that the leave-taker is aware of developments in the School and College, open funding calls and opportunities, etc;</td>
</tr>
<tr>
<td>• taking advantage of any available School or College funding for this purpose that may be used for employing doctoral or postdoctoral researchers, such as our Maternity Plus scheme;</td>
</tr>
<tr>
<td>• ensuring that non-research workloads, such as teaching or administrative work, are at an appropriately reduced level, at least in the year following the leave, bearing in mind that this should not be so as to impact negatively on future promotion considerations;</td>
</tr>
<tr>
<td>• considering priority requests for the award of any available PhD studentships in the two years following the leave;</td>
</tr>
<tr>
<td>• treating sympathetically any requests for other support from the School in the two years following the maternity leave or absence, covering conference travel, short breaks for visits or research work, or any other research related activities.</td>
</tr>
</tbody>
</table>

One member of staff was able to put together a successful ERC starting grant application for ~£1 million funding during this period of reduced teaching after maternity leave.

Having realised we had a number of new or prospective parents within the School, we organised an event on caring policies to address questions about maternity and paternity leave etc. We asked a member of the University HR team to present the information and provide some literature, but the event was only attended by 7 people, mostly those with children already. Qualitative feedback indicated that some female members of the school were reluctant to attend such an event, even though the information may have been useful in the future, for fear of starting rumours about their family plans. We learnt from this experience that there are a number of factors to consider and events need to be carefully targeted. However, we have promoted the literature from the event on the Juno website along with links to the University services related to parenting and caring. We are considering directing a future event towards line managers, who would need to know how to handle requests relating to caring leave from their staff, especially in light of the recent changes to national parental leave legislation. *(Action 1.1.3b)* QMUL has chosen to enhance shared parental pay over and above the basic statutory requirements, and to align it with existing maternity leave arrangements to allow the full inclusive intent of these regulations to take effect.

The Head of School makes an effort to ensure that the School celebrates parenting by including pictures of the babies in the School newsletter. Recently there was a picture of the father (a School Postdoc) holding the baby and in another instance it was the birth of a grandchild. An example is shown from the January newsletter:
January 2015 Newsletter

Staff News

Welcome to Farzana Ali who joins us as a temporary Administrative Assistant providing maternity cover for Depa Sharmin.

Congratulations to Sijme-Jan Paardekooper and Annemiek on the birth of their daughter Teya, to Tom Whyntie and Jen on the birth of their son William and to Depa Sharmin and Shanoor on the birth of their son Zakariyah Ayyub Ibn-Ahmed.
4 Statistical data
This section includes the detailed statistical data although the main conclusions and derived actions have been discussed in the previous sections.

4.1 School Composition
The current School composition is given in Figure 3. Although we suffer from low number statistics, there is good evidence of the "leaky pipeline" trend, with a clear drop in the female fraction from graduate students (33%) to post-docs (16%) to academics (6%, soon to be 8%). There has been a slight increase in the fraction of post-docs since we submitted our Practitioner application (14% female post-docs in 2012), but the current level is still below the national average as is the fraction of female academics (comparing to Ref [2]– national average in 2011/12 = 16% female academic staff and 19.2% female post-docs). However, the number of female graduate students has increased significantly from 21% in 2012 to 33% in 2014/15, which is now above the national average in 2011/12 (24.6% Ref [2]) following concerns and actions initiated from our Juno practitioner work. (Practitioner Actions 6 and 7)

![Figure 3 Current school composition (April 2015)]

To better understand these numbers we look at the female fractions separately for each research group in Figure 4.
Figure 4: Staff breakdown by grade for each research group.

Figure 5 shows the same data as percentages, although care has to be taken interpreting this format due to the small number statistics.

Figure 5: Staff breakdown by grade for each research group, given as percentages (beware of the small numbers in each category).

It is clear that the lowest female percentages are found in the string theory group (CRST) with only 2 female graduate students out of 11 graduate students, a single male post-doc and 9 male academics. Given the low level of funding for post-docs in this area, little can be concluded from the statistics of one position. The CRST group explained that theory, in particular this field, is very male dominated, even from an
undergraduate level, which is backed up by undergraduate module choice data. The three most theoretical final year modules (Advanced Quantum Field Theory, Relativistic Waves and Quantum Fields and Functional Methods in Quantum Field Theory) all have 7-8% females enrolled this year, and 1 female in 12 students conducting final year projects on theory topics. In this light, the nearly 20% female graduate student ratio is good, and in fact not inconsistent with national averages. However, we should investigate what deters female students from this area of study and if there is anything within the School at QMUL that contributes to this. **(Action 1.2.1d)** The CRST group is now being strongly encouraged to seek female candidates for future academic roles. **(Action 2.2.2c)**

The Astronomy Unit has also suffered from historically from low female academic numbers. According to a snapshot taken in September 2014 the numbers were 0% at both post-doctoral and academic level. The situation has improved with the recruitment of two female PDRAs in 2015 after the data in figures 4 and 5 was compiled (one a Marie-Curie fellow, the other supported by the Astronomy Unit’s STFC consolidated grant), so that the fraction of female PDRAs in the Astronomy Unit now stands at 25%. A significant effort was made to seek suitable female candidates for a recent vacant lectureship position in Astronomy, and a female academic has now been appointed to this position (start date September 2015). Specific measures were taken to increase the pool of female applicants for this position and to make the position as attractive as possible to the successful candidate as discussed in section 3.2. The motivation for adopting these more generous negotiating positions was driven significantly by the desire of the School and the Astronomy Unit to address the lack of female staff members in Astronomy. In September 2015, the projected gender make-up of the Astronomy academic staff will be 6.25% female and 93.75% male. The Astronomy Unit considers the recruitment of more female staff members to be an issue of the highest priority, and will aim to address this when future appointments become available.

In the CCMMP group, there are a large number of graduate students, boosted by a number of positions funded by the Chinese Scholarship Council, with a 36% ratio of females, well above the national average but again this group lacks female academics and future openings will be viewed as an opportunity to address this. **(Action 2.2.2c)**

### 4.2 Staff Recruitment Data

Below we present a brief analysis of the staff recruitment data for the time periods 2011-2015. Given the relatively small numbers of staff who are appointed during a typical academic year, any analysis will inevitably suffer from small number statistics, but none-the-less an informative picture can be seen to emerge. Although University central services provided the School with recruitment data for this period we found that the data is highly incomplete after close inspection. Instead, we have gone through all of the application forms and shortlists from 2011-15 that the School has on record to harvest data on the gender ratios of the applicant pools, the shortlists and the final appointments for each of the positions filled. We note that our data is incomplete, as not all applicants declare their gender in their applications, and the gender of many applicants is not obvious to us from simple inspection of their names. Where possible, we have used Google, Facebook and other on-line data sources to determine the gender of the applicants. (Note this has only been done after the fact for analysis purposes, not
during any of the recruitment processes! We have not included applications in our statistics if the applicant’s gender could not be determined. We have started to work with the QMUL SAT to add text to application forms explaining how we use their declared gender information in an effort to encourage more applicants to share this voluntary information, and are also liaising with the diversity team and central services to ensure that future central data is provided in a reliable and useful format. (Action 1.2.1a)

4.2.1 Academic staff appointments (2011-2015)

The School has appointed 11 lecturer staff between 2011-2015 (3 in the CRST, 2 in the PPRC and 6 in the AU). These appointments are distributed through the years as follows: 1 in 2011; 3 in 2012; 5 in 2013; 2 in 2014; 1 in 2015. The histograms in Figure 6 (and in the similar figures shown later) show the percentage of female applicants, the percentage of shortlisted candidates who were female, and the percentage of job offers that were made to female candidates. We can see that the number of female applicants is between 12 and 20 % of the total across the years. The middle histograms in Figure 6 show that the School has consistently shortlisted female candidates for interview at a rate that is very similar to the fraction of female applicants. As discussed above, the Astronomy Unit recruited into two permanent positions in 2014, with one of these appointments being a woman who will arrive from Princeton in September 2015.

Figure 6: Recruitment data for lectureship appointments between 2011-2015, showing the percentage of female applicants, the percentage of shortlisted candidates who were female, and the percentage of job offers that were made to female candidates.
4.2.2 Postdoctoral appointments (2011-2015)

The data presented in Figure 7 apply to the recruitment of PDRAs across all research groups within the School. The numbers are distributed across the years and research groups as follows: 2 in 2011 (1 in CCMMP, 1 in PPRC); 4 in 2012 (1 in AU, 1 in CCMMP, 2 in PPRC); 8 in 2013 (3 in AU, 2 in CCMMP, 1 in CRST, 2 in PPRC); 7 in 2014 (3 in AU, 2 in CCMMP, 2 in PPRC); 2 in 2015 (2 in AU, both female). We can see that there has been a large variation in the fraction of female candidates applying for PDRA positions over the years. But excluding 2011, for each of the years the numbers of female applicants ranged between 16-30% (in line with the national average in Ref [2]), and the percentage of shortlisted female candidates was always similar to this, being between 10% and 27%. The percentages of female candidates who were finally appointed are seen to be quite variable, due to the small number of actual appointments, but consistently exceed the percentage of female applicants for the years 2012-2015. It is tempting to conclude from the data that the fraction of appointed PDRA staff that is female is increasing with time, but we are cautious about reaching too-firm a conclusion about this as the data for 2014-15 applies to only a single appointment. It is worth noting that the Astronomy Unit also recruited an additional female PDRA in 2015 who is not included in Figure 7 because the funds for this position came from a Marie-Curie grant, for which the selection process operated externally to the School.

It is early days with low numbers of appointments to consider, but the female percentage of applicants and appointments to post-doctoral positions looks better than the previous years and the current female ratio of post-docs, so we are optimistic that these data indicate the start of a change in our post-doc trends. Analysis and increased awareness of this data and the new recruitment procedures discussed in section 3.2 could be beginning to have an impact – we will continue to review these statistics carefully.
4.2.3 Non-academic staff recruitment (2011-2014)

The data presented in Figure 8 applies to the recruitment of administration staff within the School for the four years 2011-2014. There have not been any appointments of staff into these professional services positions in 2015. These staff undertake a number of roles in the School, including office administration, grant support roles and acting as outreach officers. Figure 8 shows that female candidates for these positions tend to dominate the applicant pool, as well as the shortlists and the actual appointments. In each of the four years we see that the fraction of appointed staff who are female is equal to or exceeds 50%, and since 2012 this fraction of appointments also exceeds the fraction of women applicants. Given that females dominate these support roles in the School, a recruitment bias in this direction is not desirable. Therefore, we will enforce a specific action to review the recruitment process and monitor against a bias against males during the recruitment process for non-academic roles. (Action 2.2.1b) This pattern has been seen elsewhere at QMUL and we will work with HR and the QMUL gender equality self assessment team to address these issues.
In summary, the data for recruitment indicate that our shortlisting processes are leading to selections for interview that are fairly representative of the gender balance within the overall applicant pools, but observed biases in non-academic role recruitment will be addressed. These data, however, are averaged over the School, and do not allow us at present to examine what is happening at the level of the different research groups within the School. Given that the individual research groups show wide variation in the fractions of their staff who are female, this is an area that we plan to investigate in the future: how do the data look when examined on a group by group basis? In order to do this we will require there to be a significant modification of the way in which recruitment data is collected and stored. Whilst liaising with central University services to improve on the current database provisions, we have also taken actions in-house to collect data during each recruitment exercise based on the information available to us at the time of shortlisting and interview (see section 3.2).

We have kept a record of the composition of interview panels for all staff positions since 2013. During this period, 29 posts were interviewed for, with an average of 3 members on the interview panel, and an average of 0.8 women per panel, but a total of 12 all male panels. During the 2014/15 academic year QMUL has developed a policy to ensure gender representation on all panels, encouraging inclusion of members from adjacent levels of authority (e.g. post-docs) or from neighbouring Schools or other institutions in order to achieve this.

### 4.3 Staff Promotions Data

Since 2010, we have monitored promotions applications within the school and have seen an average of 5.8 applications per year (2010-2014 data, 2015 round not yet concluded). Out of a total of 29 applications during this period, 2 (6.9%) have been from female applicants, directly mapping the female ratio of academics in the school, and one of the two female applications was successful. The overall success rate of promotion applications in this period is 48%. Therefore, we can conclude that there is...
no gender bias in the promotions data. Table 4 includes the promotions application
data for this period broken down into various categories based on the gender and
nationality of candidates and also the level of application. The only noticeable
departure from the 50% success rate is in the Non-European category, but with only 4
data points, it is hard to draw firm conclusions from this!

Table 4: Statistics for promotion applications over the period 2010 - 2014 (5 years of data) broken down by
different categories (Yes = promotion awarded, No = not awarded).

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Success Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>14</td>
<td>48%</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>White</td>
<td>11</td>
<td>12</td>
<td>48%</td>
</tr>
<tr>
<td>Asian</td>
<td>3</td>
<td>3</td>
<td>50%</td>
</tr>
<tr>
<td>British</td>
<td>6</td>
<td>5</td>
<td>55%</td>
</tr>
<tr>
<td>European</td>
<td>7</td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td>Non-European</td>
<td>1</td>
<td>3</td>
<td>25%</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>2</td>
<td>3</td>
<td>40%</td>
</tr>
<tr>
<td>Reader</td>
<td>7</td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td>Professor</td>
<td>5</td>
<td>5</td>
<td>50%</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>15</td>
<td>48%</td>
</tr>
</tbody>
</table>

4.4 Flexible Working, career breaks and sabbaticals data

Over the past 7 years, 16 academics have taken sabbatical leave, averaging just over
2 staff per year on leave for a full year period at once. In this time, no female academics
have taken sabbatical leave, however, two of the 3 current female academics do not
currently have teaching commitments due to research grants, and two started at QMUL
only 5-6 years ago. One academic in the School works part-time at 25 and one
professor has recently chosen to reduce his hours by 50% on the USS “flexible
retirement” option. Apart from them we have not received any requests for flexible
working although there are clear links to University policy detailing the options on the
staff intranet page. Some of the administration staff work part time, for example one
member returned to a 4-day week after maternity leave.

Since January 2014, 5 staff have taken paternity leave and a further 3 intend to
within the next 2 months. For the current academic year 4 staff (1 female) have placed
official requests to work from home on a regular basis and many more have requested
work-from-home periods on an ad hoc basis. One academic has taken maternity leave
(7 months) in the past 5 years and one academic is about to take a one-year career
break. No other staff have taken or requested career breaks on grounds other than
maternity in the past 5 years.
4.5 Undergraduate Data

4.5.1 Annual composition

The data on student numbers are collected centrally by the Strategic Planning Office (SPO) and released to us each Spring. The plots distributed with the latest data set are shown here. Figure 9 shows a steady increase in student numbers over the past three years, which tracks in both male and female student numbers. The QMUL female: male ratio tracks the national upper quartile. Figure 10 shows the percentage of female students out of the total cohort by study status (though all our undergraduates are first degree students). There is a slight dip in the female fraction in 2012/13 though this is not statistically significant. Figure 10 also allows comparison to the female ratio at postgraduate level study, which is slightly higher than at undergraduate level. We do not conclude any biases or issues from these data.

The 2014/15 intake numbers are 109 male students, 40 female students, resulting in a 26.8% female ratio, an increase over the 2013/14 numbers.

**Undergraduate Female:Male Ratios 2011/12 - 2013/14**

![Undergraduate Female:Male Ratios 2011/12 - 2013/14]

**Figure 9:** The female: male ratio of QMUL undergraduate physics students over the past three years.
Figure 10: The percentage of students who are female on different courses for the past three years.
Figure 11: Heidi comparator data for undergraduate students on physics courses in 2013. The national average female percentage was 21.3% and the QMUL percentage was 22.3%.
Figure 11 includes the Heidi comparator data distributed by the SPO annually. The latest release (2013 data) shows that the QMUL undergraduate female percentage of 22.3% was 1% higher than the national average that year.

4.5.2 Undergraduate Recruitment
The data on student recruitment are also collected centrally by the Strategic Planning Office (SPO) and released to us each spring. This section includes plots prepared by the SPO from the latest data set, which includes numbers for all offers sent to and accepted by prospective students. Note these numbers are different to the final intake numbers as not all students achieve the required grades, some decide to withdraw during the process, and some enter through clearing. Figure 12 gives the ratio of applications to offers (left) and acceptances (right) for each level of study but in this section we just discuss the undergraduate recruitment. The ratio of applications to offers appears fairly constant with time, with little difference between males and females. However, whilst the female ratio of applications (or offers) to acceptances has stayed very constant over the three years, the ratio for male acceptances has increased – i.e. the fraction of male students accepting our offers has been decreasing over time. This is not a large effect so it is not yet clear how significant this is alongside other factors such as the increased cohort size but is something we will continue to monitor. We will also feed this back to the QMUL SAT to establish whether this is part of a wider trend across the institute. (Action 1.2.1d) The entry tariff has not changed over the course of this data: it is set at A(physics/maths)AB for MSci courses and A(physics/maths)BB for BSc courses.

<table>
<thead>
<tr>
<th>Applications Female:Male Ratios 2011/12 - 2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numbers</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td><strong>F</strong></td>
</tr>
<tr>
<td><strong>M</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**Figure 12: Ratio of applications to offers by gender and year for different levels of study.**

Figure 13 shows the percentage by gender (females in green) of applications and offers for undergraduate course places for the past three years. There is no visible difference between the fraction of female applicants and the fraction of female offer holders, and therefore no evidence of any biases in the recruitment cycle here. Figure 14 shows the success rate for undergraduate candidates by year and gender, where success is calculated as the number of offers made divided by the number of
applications. There is a slight overall increase in the success rate, due to higher intake numbers that are not really tracked by higher application numbers.

![Figure 13](image1.png)

Figure 13: Percentage of female (green) applications and offers made for undergraduate degree study by year.

![Figure 14](image2.png)

Figure 14: Undergraduate application success rate by year and gender.

The recruitment committee were able to collect more detailed data sets, with information by course, applicant age, nationality and disability for the past two years (2014 intake and 2015 ongoing recruitment cycle) that were analysed in more detail.

Figure 15 shows recruitment broken down by course with BSc (3 year) and MSc (4 year) options for each subject. The majority of students chose the straight physics option, with a higher percentage of females choosing the four year course over the three year course. Interestingly, this trend is matched over all subjects, with a consistently higher female ratio on the MSc courses than the BSc. The astrophysics course attracted the highest female ratio, and the theoretical option the least. However, the percentage of female applications to the particle physics option is also low, suggesting that the high percentage of female academics in this research group is not positively influencing the applications.

Figure 16 shows the same thing as Figure 15 but only for students enrolled onto each course. The numbers differ because not all students achieve the grades required, some chose not to enrol for other reasons and some are admitted through clearing. The differences in gender ratio between BSc and MSc options is no longer apparent and the female percentage for the theoretical and particle courses is even lower in those enrolled, than those accepting offers but the opposite effect is seen on the astrophysics option. We are not sure how to explain these results, or how much to draw from one years worth of data. However, this is an area we intend to monitor going forward to see if these are persistent trends and will again investigate if this trend persists across QMUL through the QMUL SAT. (Action 1.2.1d)
Figure 15: 2014/15 recruitment by course. The data shows the numbers for students accepting offers onto each course.

Figure 16: 2014/15 enrolments by course. The data show the numbers of students enrolled onto each course.

Figure 17 shows 2014/15 application data by nationality, and hence fee, status. Due to the way the data is recorded, there are both confirmed and provisional categories for each status. This data show that the female percentage is higher for our EU and overseas applicants, than home applicants. QMUL attracts a diverse student cohort with relatively high numbers of non-home applicants, which could explain why our student female ratio is well above the national average. This is another item we plan to follow up through the QMUL SAT to see if such trends are seen across other Schools and Faculties.
Figure 17: 2014/15 applications by the applicant's nationality status.

Figure 18 shows 2014/15 application data by the age of applicants. It is interesting to see that the female ratio in the 20-24 age group, mostly those who have tried school-leaver jobs and decided to return to education after a few years, is much lower than the other categories. At 12.5%, the female fraction in this age group is significantly below the average female fraction of our intake cohort.

Figure 18: 2014/15 application data by age group.

We also collected data on the disability status of applicants in the 2014/15 recruitment cycle. Due to small number statistics we have grouped all disability categories together (ranging from dyslexia, autism to physical impairment). In the left plot of Figure 19 we show the female ratio of all applicants with and without disabilities, and in the right plot, the same data for those that accept offers at QMUL. There does not appear to be any significant difference in the gender ratio of disabled and non-disabled students and no change in the ratio between applicants and acceptors.
It is also interesting to study the final destination of the undergraduate applicants to physics at QMUL. Figure 20 shows the gender fraction for each category as recorded in the admissions database (details in caption). For a single year of data, no significant conclusions can be drawn as the statistics in some categories are small and hence the error bars on the gender fraction are large, but we will continue to monitor this in future recruitment cycles.

Figure 20: Gender fraction for different final destinations of the undergraduate applicants to physics in the 2014/15 recruitment cycle. Applicant UF here means the student was awarded undergraduate funding at QMUL but not in the SPA (possibly on a foundation course instead). Applicant UF elsewhere means the student took up a place at a different institution. Transferred to student records means the student was enrolled on the course in the SPA. RAT’ed means the student accepted the offer but chose to defer by a year. Error bars indicate the significance of the fraction.
For the 2015 recruitment cycle, the Juno committee made the following recommendations to the recruitment team:

- When organising tours, avoid distributing female applicants evenly across tour groups and ensure that there are always at least 2 or 3 female students in the same group to avoid minority bias.
- Student ambassadors are encouraged to engage with all students, especially those from minority groups (e.g. age, gender) as soon as possible to avoid them feeling isolated.
- Provide numbers on the make up of the current student and staff cohort (e.g. gender, nationality) to those involved in the UCAS days so that applicants get a realistic understanding of our diverse cohort.

The 2015 recruitment cycle is still in progress, so we have not combined the results with 2014 data yet. However, the plots in Figure 21 are included to illustrate the latest results reviewed by the Juno and Recruitment committees, which do not appear to indicate any biases or issues for which we should take action immediately. Note that the ratio of female applicants in the 20-24 age category does not mirror the deficit observed in the 2014/15 recruitment cycle, suggesting that this was probably a statistical fluctuation, or perhaps our efforts to engage female applicants at UCAS days has had a positive effect on this demographic, since older applicants are likely to feel more isolated.

![Recruitment Plots](image)

Figure 21 Recruitment plots available from current, 2015/16 recruitment cycle. Top left: overall application gender ratios, Top right: breakdown by student nationality status, Bottom left: breakdown by disability status, Bottom right: breakdown by age group.

We invite all applicants to a UCAS day and interview but not all choose to attend. We aim to investigate whether attendance at open day positively influences whether students accept places at QMUL. However, the interview data has only been entered into the University's admissions database this year, so we are not yet able to perform this correlated analysis. (Action 1.2.1d) In the mean time, we have been collating statistics on the staff and student ambassadors participating at UCAS days to ensure
they are representative of the gender ratios within the school (24% of the ambassadors participating in the 2014/15 recruitment cycle were female and 6.6% of interviews were conducted by female academics). Whilst increasing female ratios of QMUL members at UCAS events may persuade more female students to accept offers, it would put more pressure on existing female staff and ambassadors and we felt that this was not a necessary or appropriate action given that undergraduate female ratios are above the national average already.

4.5.3 Undergraduate Progression and degree classification

For the purposes of this Champion application we considered student academic performance data as far back as the 2011/12 academic year, shown in Figure 22. The data from that year were particularly striking as no first-class degrees were awarded to women. However, there were only 17 graduating female students in this cohort so we believe that this was a statistical anomaly to be expected every so often given the relatively small number of graduating students; there is no obvious discrepancy in the degree classes or other academic achievements of women in any subsequent year. All student exams are marked anonymously and grades are assigned following strict formulas so there appears to be little possibility for gender bias in the final degree assignment. Therefore, we consider it more important to monitor marks at the module level, as we have implemented from 2014/15 onwards.

![Figure 22: The percentage of degrees at each grade awarded to female and male students for the past three years.](image)

Rather than relying on final results at graduation, we used data from our final exam board to plot students’ mark trajectories through their degree by gender, in the hope that this would allow us to pinpoint the origin of potential inequalities. These are shown for the past two academic years in Figures 23-26.
Figure 23: Mark trajectories for BSc students graduating in 2014. Red dots represent male students, blue dots female students.

Figure 24: Mark trajectories for MSci students graduating in 2013. Red dots represent male students, blue dots female students.
Figure 25: Mark trajectories for MSci students graduating in 2013. Red dots represent male students, blue dots female students.
Figure 26: Mark trajectories for MSci students graduating in 2014. Red dots represent male students, blue dots female students.
These figures show the relationship between students’ performance in each pair of years of their degree; as expected there is fairly good correlation between performance in different years, and by eye there is no obvious difference between male and female students’ performance. Our student numbers remain too small to make a formal statistical analysis viable. We will continue to monitor data in this way (Action 1.2.1j) following each year’s Exam Board meeting.

These data include only graduating students. Data on students who failed to progress to the next year level or to graduate were extracted from the 2014/15 exam board reports, separately for the BSc and MSci programmes and are summarised below.

- Third year MSci to fourth year: 100% progression rate.
- Second year MSci to third year: 31/31 students progressed to the third year of studies. 7 students were demoted from the MSci to the BSc and of these 7 students five were male, one was female and one was transgendered,
- Second year BSc to third year: 68 out of 78 students progressed to the third year of studies. Of the ten students that did not progress 9 were male and 1 was female. The female student was permitted to retake the year again on the grounds of extenuating circumstances. Of the male students one interrupted his studies and one was permitted to retake the year on the grounds of extenuating circumstance, the remaining 7 male students failed to meet the academic hurdle for progression.
- First year MSci to second year: 43/47 students progressed to the second year. The four students that did not progress were all male and out of these three students failed to meet the academic hurdle for progression and one student interrupted his studies.
- First year BSc to second year: 63/82 progressed to the second year. Of the 19 students that did not progress 7 were female and 12 were male. Of the 7 female students that did not progress three had interrupted their studies earlier in the year, three were awarded a retake of the year on the grounds of extenuating circumstances and one failed to meet the academic hurdle for progression. Of the 12 male students that failed to progress one had interrupted his studies earlier in the year, two had changed their programme of studies to another discipline, three were awarded a retake of the year due to extenuating circumstances and six failed to meet the academic hurdle for progression.

To summarise these data, 33 out of the 282 students (12%) did not progress to the next level of study. Of those that didn’t progress, 24% were female, consistent with the total female ratio of our undergraduate cohort. With only 1 of the 8 female students, but 16 of the 25 male students failing to meet the grades for progression, it would appear that there is some gender disparity in the reason why students do not progress, though with only one year of data we cannot draw firm conclusions. We will study this data on a yearly basis in the future. (Action 1.2.1j)
4.5.4 PASS: Student Mentoring Scheme attendance

The student organisers of the PASS scheme collect statistics on attendance at each PASS session. The data are stored by gender in a Google spreadsheet maintained by the students. In 2014-15 19 sessions were held with a mean of 11.7 attending students per session, 38% of whom were female. The highest number of students attending any one session was 33, with 14 being female. An average of 5 mentors attended per session but only one of the 17 mentors trained in 2014 was female so the number of participating female mentors was low. The student organisers have invested more effort in persuading more females out of the mentee cohort to train as mentors for next year. In 2013-14, 13 sessions were held with an average of 9.1 attendees per session, 24% of whom were female, and an average of 3 mentors, 7% of whom were female. Therefore, it appears that the popularity of the PASS sessions has increased, particular amongst the female cohort, though the number of active female mentors has declined. However, with small numbers of trained mentors (10-12 per year), such fluctuations are not unexpected. The students who attend PASS sessions give very good qualitative feedback, appreciating the support and networking with their peers.

4.5.5 Undergraduate Prizes

The committee noted that undergraduate prizes are not in general an especially useful indication of potential gender discrepancies, since relatively few (4-6) are awarded each year and the same student is often awarded a prize in multiple years. For instance, over the three academic years leading up to this application the percentage of prizes awarded to female students was almost exactly representative of the gender distribution of students. Four prizes were awarded to women out of 15 total, or 27%; this is slightly higher than the percentage of women students over these three years (Figure 10). However, three out of these four prizes were awarded to a single talented student, for exceptional performance in her second, third, and fourth years.

For these reasons we consider that monitoring marks and progression rates by gender is a more reliable guide to potential structural inequalities. Nonetheless, the committee will continue to collect and monitor prize data.

4.6 Graduate student Data

4.6.1 Annual composition

Figure 10 includes gender data on the composition of the post-graduate cohort, by year, alongside undergraduate data. 60-70% of the postgraduate cohort are following research-based degrees rather than taught courses, with no apparent difference in this fraction for male or female students or across the three years of data provided. The fraction of female postgraduates is consistently 3-4% higher than the fraction of female undergraduates. The Heidi comparator data, included in Figure 27 for PGT courses and Figure 28 for PGR courses shows similar trends nationally with a slightly higher percentage of females than at UG level (national averages in 2013: UG: 21.3%, PGT: 23.8%, PGR: 22.7%). However, the female fraction of the QMUL postgraduate cohort, both PGT and PGR, exceeds the national average by nearly 4 percentage points (QMUL is 1% above the national average UG female ratio). Therefore, it appears that the trends observed during our Practitioner work, with decreasing female postgraduate numbers have been rectified by our actions to more closely monitor graduate student recruitment and progress, and a stronger support network. Changes in our recruitment
practices and post-graduate funding profile may also have had an effect in this area with significantly more places now allocated through schemes such as the Chinese Scholarship Council (CSC) as discussed in section 4.1.

Figure 27: Heidi comparator data compiled in 2014 for postgraduate taught (PGT) courses the previous year. The national average percentage of females on PGT courses in 2013 was 23.8% whereas the QMUL average was 28.6%.
Figure 28: Heidi comparator data for the percentage of female students on postgraduate research (PGR) courses in physics for 2013. The national average was 22.7% but the QMUL female percentage was 26.7%.

4.6.2 Postgraduate Recruitment

Figure 12 includes the ratios of applications to offers and acceptances for PGT and PGR places over the past three years (alongside undergraduate data as supplied by the SPO). As expected, there is significantly more competition for postgraduate research places than undergraduate places and the lower numbers result in more variation in the ratio year-to-year at this level. In 2013/14 there was a downward fluctuation in the number of PGR places offered (26 offers were made for 19 places, of which 5 were offered to females and 3 accepted by females) compared to 46 offers for 34 places, with 16 offered to females the previous year. This gives a stark change in the ratio for female applications to offers over previous years, but the ratio is in fact similar to that for male candidates, whereas in previous years the situation appeared more favourable for female than male candidates. When the data is plotted as success rate (=number of offers / applications) in Figure 29 we see that the success rate is actually higher for females than males applying for PhD places (PGR) in 2011/12 and 2012/13 and there could be some evidence for positive bias towards females in the recruitment process.
Figure 29: Application success rate for each type of postgraduate course (and previously shown undergraduate data) by gender and year.

To understand these trends we have looked at the PhD recruitment by group. Figures 30-32 give PhD recruitment information for the academic years 2013/14, 2014/15, and 2015/16. Although the number of applications in each group is quite variable year to year, we do notice that in two out of four groups, the percentage of female applicants has steadily increased over the three academic years: PPRC went from 14% to 25% to 35.3%, and CCMMP went from 25.5% to 32.5% to 39.3%. The CRST has held relatively steady but gone slightly down in its percentage of female applicants, going from 11.6% to 9.8% to 8.3% in the current year. Finally, the AU has seen a significant decrease in its percentage of female applicants, from 38.8% in 2014/15 to 25% in the current year. (We neglect the 2013/14 data for this group where the high numbers are because at this time the group was part of the School of Mathematics.)

Each chart is solely for the number of applicants; due to the low numbers, we did not make charts for the offers accepted/declined, though that data is included in table 5 for 2013/14 and 2014/15. It appears that the fraction of females accepting offers into the PPRC group is particularly low in these data, though if we look back to 2012/13 for this group, 4 offers were made to female students, 2 to male students and the intake was 4 males, 2 females. It should also be noted that the ratio of offers to acceptances is
lowest for PPRC. We believe this could have been impacted by QMUL joining the Russell group in 2012; with the increased prestige, we now find ourselves competing with a different selection of Universities for graduate candidates, many of whom apply to 5-6 places. We have also brought our application deadlines forward in line with other Russell group universities.

Table 5: PhD Recruitment data by group showing offers and accepted places by group and gender F=female, M=male. Full acceptance data were not available for 2015/16 at the time of writing.

<table>
<thead>
<tr>
<th>School</th>
<th>Offers Made 2013/14</th>
<th>Offers Accepted 2013/14</th>
<th>Offers Made 2014/15</th>
<th>Offers Accepted 2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>10M, 4F</td>
<td>10M,4F (includes Maths)</td>
<td>2M, 2F</td>
<td>2M, 1F</td>
</tr>
<tr>
<td>CCMMP</td>
<td>4M, 2F</td>
<td>3M, 2F</td>
<td>15M, 8F</td>
<td>4M, 6F</td>
</tr>
<tr>
<td>CRST</td>
<td>4M</td>
<td>4M</td>
<td>2M, 1F</td>
<td>1M, 1F</td>
</tr>
<tr>
<td>PPRC</td>
<td>14M, 4F</td>
<td>6M</td>
<td>7M, 1F</td>
<td>4M</td>
</tr>
</tbody>
</table>

Figure 30: PhD Applications by group and gender for 2013/2014 intake. The left plot shows total numbers and the right plot shows the data as percentages of the total.

Figure 31: PhD Applications by group and gender for the 2014/15 intake. The left plot shows total numbers and the right plot shows the data as percentages of the total.
Figure 32: PhD Applications by gender and group for the 2015/16 intake. The left plot shows total numbers and the right plot shows the data as percentages of the total.

4.6.3 Postgraduate Progression

The graduate degrees committee (GDC) have a mechanism in place to monitor progression of all enrolled graduate research students and to intervene if there is any cause for concern. Supervisors are asked to fill 6-monthly progress reports on each student, that are then read and reviewed by a member of the GDC and any worrying cases are flagged and followed up on. These reports are all filed and reviewed at GDC meetings, and in this way, we keep close checks on students nearing the end of their studies or funding periods to ensure successful outcomes. No adverse trends, particular with gender that the GDC has been asked to be alert for (Practitioner Action 7), have been observed. A few cases have been highlighted in which the student has not coped well with stress and measures have been taken to help them deal with the situation and continue with their studies, for example, in two cases of students on long term attachments who did not appear to be making good progress, the supervisors and graduate support officer intervened to bring the student back to QMUL where better support could be arranged.

Students are funded through many different sources across the school, each with different durations and conditions, but the majority of student graduate within the allotted 4-year time frame. Using data on students enrolled since September 2009, 4 students have been / or have withdrawn themselves from studies, 1 of whom were female. 25 students, 3 of whom were female (11%, roughly in line with the female percentage of this 2009-2010 cohort), have completed successfully within 4 years, and one male student has completed successfully in over 4 years. The rest of the students recorded are not expected to have completed yet (<4 years since enrolment). Data from before 2009 has been difficult to access and appears unreliable so we have not been able to draw conclusions about trends over time.

To make analysis of graduate student progression easier in the future, a new database is currently being established, which allows queries by gender, among other things. Although the tools are now 95% in place, the historical data has not yet been propagated into this database so we are not able to perform rigorous statistical analysis in time for this report, but expect to be able to do so in a few months time. (Action 1.2.1i) A snapshot of the web-interface to the database is shown in Figure 33. We realise that the studies above do not relate completion time to funding duration. We would like to monitor this in the future to ensure sufficient support is given to graduate students nearing the end of their funding.
Figure 33: Snapshot of PhD database facility and gender monitoring tool. This is work in progress but should allow detailed statistical analysis of the PhD cohort in a few months time.

4.7 Group Seminars

For the last 2 years, before each semester, seminar organisers are emailed to encourage them to monitor the gender ratio of invited speakers which we would expect to be at least equivalent to the proportion of females at the post-doc/lecturer level in the field, however, at 14% female speakers over the past 4 years it appears that we are below the national average representation of women at these levels in Physics (Ref [2]). Further investigations are being conducted to understand the female ratios in the fields of the four specific research groups as mentioned in section 4.1, but it is apparent that the ratio of females varies across research areas so this is expected to be represented in the pool of possible seminar speakers too. Therefore, we have analysed seminar data separately for each research group since 2009 (or earlier for some groups). The variations by year are somewhat larger than might be expected, possibly due to changes in the seminar organiser. For this reason, we conclude that it is important to reinforce our goals, encouraging organisers to seek high calibre female speakers each semester, which appears to have had a positive effect with three of the research groups achieving the highest female ratio in 2014/15, though statistics are small so fluctuations are still expected. To formalize this we have set targets for each group to improve upon the highest annual female fraction previously obtained, as explained in section 3.4 and shown in table 3. It should be noted that the number of seminars held per year varies from group to group with the theory group holding most.
4.8 Website usage

The Juno website is tracked using Google Analytics, which makes it possible to keep track of page views, the average time spent on the site, the bounce rate, and the percent that exit the site. We will report the first two. In addition, it is possible to track which internal pages referred the viewer to the Juno site. This can give us an idea of where people are learning about Juno from the interfacing with the SPA website. A caveat that should be noted is that it is impossible to remove data related to Juno members accessing the website to check on improvements to the website.

Two time periods were tracked: time period A, which spans from 17 November 2013 through 16 November 2014 and time period B, which spans from 1 January 2015 through 15 April 2015. The first time period is before any updates to the School website included more Juno visibility. The latter is after greater visibility has been implemented.

The initial analytic data for the Juno page can be seen in Table 4 with the page views and unique page views normalized to a per day rate for ease of comparison. While the overall page views are lower for period B period, there are more unique page views per total page views from 68% in period A to 80% in period B. Part of the reason the number of page views is higher in A is due to the release of the Kapteyn results during this time period, which increased the page views across the entire SPA website.

Table 6 Google Analytic data for Juno public webpages at QMUL.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Page Views/day</th>
<th>Unique Page Views/day</th>
<th>Avg. Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.14</td>
<td>0.78</td>
<td>00:01:45</td>
</tr>
<tr>
<td>B</td>
<td>0.85</td>
<td>0.68</td>
<td>00:02:49</td>
</tr>
</tbody>
</table>
The referring websites were also tracked during this time. Unfortunately, most of the referrals from both time periods came from an indeterminate source that Google notes as “not set”, which is defined as Google not having the information requested. This was a total of 216 visits for period A and 36 visits for period B. For period A, the next three biggest sites that people used to access Juno were from the Astronomy Unit, the Science and Engineering Faculty (S&EF), and the main SPA page. Other pages include the Ph.D. program, the SPA colloquium page, and the Athena SWAN charter page. For period B, the four most frequent recorded visits were from the jobs page for the PPRC, the list of research in the SPA, the S&EF page, and the Athena Swan charter page. One noticeable difference between the periods is that while slightly fewer people are visiting the Juno page in period B than period A, they are interacting with the page for a full minute longer on average, which indicates that people entering the page are reading more of the material. Due to the smaller statistics of period B, it will be interesting to see if updated statistics when monitoring more closely match period A, correcting for a major release from one of the research groups within the SPA. At present, not much more can ascertained. Based on these results, we will ensure that Juno is clearly and correctly linked from the most popular SPA website pages.

5. References
Appendix 1 – Shortlisting form

Shortlisting form for temporary monitoring of gender ratios in staff recruitment process:

Demographic Data For Shortlist

Please list the members of the shortlisting panel:

How many of the applicants for this position were:

Male:
Female:
Gender Unknown:

How many of the people shortlisted for this position were:

Male:
Female:
Gender Unknown:

If people shortlisted were all male, or all female, why was that the case?

Name and signature of shortlisting committee chair:

Date:
Demographic Data For Interview

Please list the members of the interview panel:

How many of the people interviewed for this position were:

Male:
Female:
Gender Unknown:

If interviewees were all male, or all female, why was that the case?

What is the gender of the person to whom you plan to offer the job?

Name and signature of interview committee chair:

Date:
Appendix 2 – Mentoring form

Mentor request form:

School of Physics and Astronomy Mentoring Scheme - Mentor Request Form

Please fill in this form if you would like to participate in the School's mentoring scheme as a mentee. The following information will be used to help pair you with a suitable mentor. This form is for academic and research staff. If a member of professionals services staff wishes to have a mentor they should speak to the School Manager in the first instance.

First Name *
Surname *
Research Group *
Job Title *

Start Date of Employment in the School of Physics and Astronomy *

Day: Month: Year:

Which of the following would you prefer? *

- Within your research field
- Another area of physics
- Outside of the School of Physics and Astronomy
- No preference

Which of the following would you prefer? *

- An academic close to your career stage
- A more senior academic
- No preference

Are there any particular questions or issues that you would like to address through a mentoring relationship?

Are any of the following considerations important to you?

- The mentor’s gender (please specify in the text box in the question below)
- The mentor’s experience of balancing work with a young family
- The mentor’s experience of issues faced by non-UK residents
- Other. Please specify in the question below.

If you answered other to the above questions please specify here

Submit
Appendix 3 – Exit interview form

Exit interview form

Staff Exit Questionnaire

The response to this questionnaire will be useful for our project JUNO work which addresses issues of diversity and fairness within the School. The JUNO committee will treat this information anonymously. If you have any feedback on this questionnaire, please contact spa-juno@qmul.ac.uk.

How long have you worked at Queen Mary? *

What is your job position? *

What is your current grade (1-8)? *

Which research group (or other) did you work in? *

Where are you going to? *

☐ Another HE Institution – promotion
☐ Another HE institution – same level
☐ Elsewhere in QMUL
☐ Other public sector
☐ Private sector
☐ Returning to Education
☐ Self employment
☐ Retirement
☐ Redundancy
☐ Other

If you answered ‘other’ to the above question please give further details

What factor(s) influenced your decision to join QMUL? (select all that apply) *

☐ Good career opportunity
☐ Reputation of research group
☐ Reputation of Queen Mary being a good employer
☐ Good Pay and Terms and Conditions
☐ Permanent role
☐ Opportunities for training and development
☐ Location
☐ Other (please specify)

If you answered ‘other’ to the above question please give further details
What have been the positive aspects of working at QMUL? *

- Good Salary
- Good Terms and Conditions (e.g., Generous annual leave)
- Interest in the role
- Promotion Opportunities
- Ethos of academic department
- Staff development and training opportunities
- Job Security
- My team / colleagues
- Good benefits (e.g., Pension, subsidised nursery, subsidised gym facilities)
- Friendliness of organisation
- Other (please specify)

If you answered 'other' to the above question please give further details

What have been the negative aspects of working at QMUL? *

Did you receive sufficient and timely information about QMUL such as relevant institution policies and procedures? If not please specify. *

If you answered yes to the above, was the information useful?

Please indicate your main reasons for leaving your current role at QMUL. (select all that apply) *

- Promotion/enhanced career prospects
- Change of career
- Return to education
- End of fixed-term contract
- Improved research alignment in new institutions
- Improved quality of academic environment in new institution
- Location
- Personal / Family reasons
- Pressures of teaching / research responsibilities
- Dissatisfaction with pay and terms and conditions
- Dissatisfaction with current role
- Dissatisfaction with management style / personality conflicts
- Dissatisfaction with the channels of communication
- Inadequate tools to do the job
- Inadequate access to technology
- Other

If you answered 'other' to the above question please give further details

Do you have any other comments to make regarding your work conditions, opportunities or career advancement, equality etc.? *
If you could change one thing at QMUL, what would it be? *

Would you recommend QMUL as an employer? Please give your reasoning. *

Submit
# School of Physics and Astronomy
## Staff Induction Checklist

### On the First Day

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet School Manager to:</td>
<td>Sarah Cowls</td>
</tr>
<tr>
<td>Obtain Key(s) to office</td>
<td>Room XYZ</td>
</tr>
<tr>
<td>Fill in form for Security for ID/Access card</td>
<td></td>
</tr>
<tr>
<td>Familiarise with fire escapes and emergency</td>
<td></td>
</tr>
<tr>
<td>procedures</td>
<td></td>
</tr>
<tr>
<td>Familiarise with first aid procedures and</td>
<td></td>
</tr>
<tr>
<td>accident reporting</td>
<td></td>
</tr>
<tr>
<td>Familiarise with local toilets, kitchen facilities</td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td></td>
</tr>
<tr>
<td>Meet with local IT Manager:</td>
<td>Alex Owen</td>
</tr>
<tr>
<td>Check suitable desktop provided</td>
<td>(PPRC only)</td>
</tr>
<tr>
<td></td>
<td>Terry Arter</td>
</tr>
<tr>
<td></td>
<td>(All Others)</td>
</tr>
<tr>
<td>Register for computer account and email</td>
<td></td>
</tr>
<tr>
<td>Make appointment with Human Resources (HR)</td>
<td>HR (Phone 3697)</td>
</tr>
</tbody>
</table>

### In the First Week

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet Head of School (make appointment with Kathy Boydon)</td>
<td>Kathy Boydon</td>
</tr>
<tr>
<td>Meet Head of your Research Group (Research and Academic Staff)</td>
<td>Richard Nelson</td>
</tr>
<tr>
<td>or Executive Officer (Professional Staff)</td>
<td>(AU)</td>
</tr>
<tr>
<td></td>
<td>Andi Brandhuber</td>
</tr>
<tr>
<td></td>
<td>(CRST)</td>
</tr>
<tr>
<td></td>
<td>Martin Dove</td>
</tr>
<tr>
<td></td>
<td>(CCMMP)</td>
</tr>
<tr>
<td></td>
<td>Francesca Di</td>
</tr>
</tbody>
</table>

---

1 Phone numbers, room numbers and email addresses are available at http://ph.qmul.ac.uk/directory/people

Last updated July 2014
<table>
<thead>
<tr>
<th>Meet with Human Resources. Take along:</th>
<th>Human Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Signed copy of contract (if not already returned)</td>
<td></td>
</tr>
<tr>
<td>• Medical health questionnaire (if not already returned)</td>
<td></td>
</tr>
<tr>
<td>• Personal details form (if not already returned)</td>
<td></td>
</tr>
<tr>
<td>• Proof of eligibility to work in the UK, including passport</td>
<td></td>
</tr>
<tr>
<td>• P45 from previous employer (if applicable)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meet with Health and Safety Coordinator to discuss:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health &amp; Safety responsibilities</td>
<td>John Dennis</td>
</tr>
<tr>
<td>Any specific Health and Safety issues (e.g. working with dangerous substances), COSHH courses.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Take online Display Screen Equipment training course at</th>
<th>Occupational Health &amp; Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://qm-web.ohsd.qmul.ac.uk/training/elearning/index.html">http://qm-web.ohsd.qmul.ac.uk/training/elearning/index.html</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Take online Fire Training course at</th>
<th>Occupational Health &amp; Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://qm-web.ohsd.qmul.ac.uk/training/elearning/index.html">http://qm-web.ohsd.qmul.ac.uk/training/elearning/index.html</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Familiarise with Professional Staff and School Admin Area (Pigeon Holes, Photocopiers etc.)</th>
<th>Kathy Boydon</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Familiarise with Campus facilities etc. (e.g. Places to eat, Students' Union, Library, Senior Common Room, Gym etc.)</th>
<th>Colleagues</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Familiarise with School and Staff Intranet:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• <a href="http://ph.qmul.ac.uk/intranet/information">http://ph.qmul.ac.uk/intranet/information</a></td>
<td></td>
</tr>
<tr>
<td>• <a href="http://ph.qmul.ac.uk/intranet/staff/staff-intranet">http://ph.qmul.ac.uk/intranet/staff/staff-intranet</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Familiarise with QMUL Intranet:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• QMUL Intranet: <a href="http://connect.qmul.ac.uk">http://connect.qmul.ac.uk</a></td>
<td></td>
</tr>
<tr>
<td>• Professional Services: <a href="http://connect.qmul.ac.uk/faculties/professionalservices/index.html">http://connect.qmul.ac.uk/faculties/professionalservices/index.html</a></td>
<td></td>
</tr>
<tr>
<td>• Academic Departments: <a href="http://qm-web.qmul.ac.uk/depts/">http://qm-web.qmul.ac.uk/depts/</a></td>
<td></td>
</tr>
<tr>
<td>• Human Resources (e.g. Working at QM): <a href="http://www.hr.qmul.ac.uk/workqm/index.html">http://www.hr.qmul.ac.uk/workqm/index.html</a></td>
<td></td>
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<tr>
<td>• MyHR (Pay slips, sickness reporting, annual leave etc): <a href="https://myhr.qmul.ac.uk">https://myhr.qmul.ac.uk</a></td>
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<tr>
<td>• MySiS (Student information and administration): <a href="https://mysis.qmul.ac.uk/">https://mysis.qmul.ac.uk/</a></td>
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<tr>
<td>• QMPlus (QMUL Virtual Learning System): <a href="http://qmpplus.qmul.ac.uk/">http://qmpplus.qmul.ac.uk/</a></td>
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<tr>
<td>• Publists (Publications database): <a href="https://publists.qmul.ac.uk/">https://publists.qmul.ac.uk/</a></td>
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<tr>
<td>• IT Services: <a href="http://www.itstrategy.its.qmul.ac.uk/servicecatalogue/ind">http://www.itstrategy.its.qmul.ac.uk/servicecatalogue/ind</a></td>
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Last updated July 2014
- Estates Helpdesk (Leaks, blocked toilets etc.): [http://qm-web.estates.qmul.ac.uk/help/index.html](http://qm-web.estates.qmul.ac.uk/help/index.html)

Familiarise with Stores and budgetary arrangements

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss probation process and targets and fill in Setup Meeting</td>
<td>Line Manager</td>
</tr>
<tr>
<td>sections of Probation Assessment form (obtained from HR)</td>
<td></td>
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<tr>
<td>Meet with Mentor to discuss future meetings</td>
<td>Mentor</td>
</tr>
<tr>
<td>Contact School Probation Mentor to discuss academic development</td>
<td>Rodolfo Russo</td>
</tr>
<tr>
<td>programme (Academic Staff only)</td>
<td></td>
</tr>
<tr>
<td>Contact the Centre for Academic and Professional Development</td>
<td>Centre for Academic and Professional Development</td>
</tr>
<tr>
<td>to discuss academic development programme (Academic Staff only).</td>
<td></td>
</tr>
<tr>
<td>See <a href="http://www.learninginstitute.qmul.ac.uk/pta/">http://www.learninginstitute.qmul.ac.uk/pta/</a></td>
<td></td>
</tr>
<tr>
<td>Sign up for College Induction Event (if available). See <a href="http://www.learninginstitute.qmul.ac.uk/prodev/induction/">http://www.learninginstitute.qmul.ac.uk/prodev/induction/</a></td>
<td>Centre for Academic and Professional Development</td>
</tr>
<tr>
<td>Signoff</td>
<td>Line Manager</td>
</tr>
</tbody>
</table>

I confirm that the tasks indicated have been completed.

Signed (Inductee):

Signed (Line Manager):

Date:

Please return this form to Kathy Boydon.
Appendix 5

Case Study for the QMUL School of Physics & Astronomy

Name: Dr Tom Whyntie
Group: Particle Physics Research Centre/GridPP

My wife was due to give birth to our son on 31st December. In the event he was thirteen days late and required an emergency caesarean section after a failed induction. While our respective families were very supportive, they live some distance away so I was essentially acting as a carer for my wife while she recovered from the surgery, as well as looking after our new arrival.

The School of Physics & Astronomy (SPA) was immensely supportive during this time, and thanks to them I feel I have been able to successfully balance work and family life in my first months as a father.

• Even before we were expecting, the SPA offered a course on maternity and paternity information for staff, so I was well-informed on what our options were when the time came;
• I was able to essentially rearrange my paternity leave as needed;
• Once my paternity leave had finished, I was able to either take additional leave as required (easily arranged via QMUL’s online system) or work from home so that I could be on hand to help out as my wife recovered;
• I feel I was able to fulfil my work responsibilities even from home thanks to the excellent provision of computing resources by the SPA, particularly those of the Particle Physics Research Centre (PPRC). Remote access to PPRC computing cluster meant I could do the physics and computing required from anywhere at any time. Software such as Skype and Vidyo provided by the SPA meant I could attend working meetings via video conference. When required, the technical support from the PPRC system administrators was superb;
• The birth was reported and celebrated in the SPA newsletter, which meant that my colleagues not only knew about our new arrival but also were very supportive on my return.

Speaking with others at local parents’ groups, I have come to appreciate that not all employers offer such support for new fathers. I have always known that QMUL – and, in turn, the SPA – provides an inclusive and supportive environment for its employees, and at this wonderful – and challenging – time of my life, I feel very lucky to be a part of it.

Areas covered
5.1.1. Clear support from Head of Department for flexible and part-time working
5.1.3. Promote the benefits of flexible working for both men and women, particularly for those with caring responsibilities
5.1.5. Encourage take up of paternity and other caring leave
Appendix 6 – Practitioner Action Plan
Included as a separate document is an annotated copy of practitioner action plan showing progress on existing actions.

Appendix 7 – Champion Action Plan
Included as a separate document is the current version of our Juno action plan. This is a continually evolving document that is reviewed at each of our regular Juno meetings.