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## **Juno Code of Practice: Advancing Women's Careers in Higher Education.**

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### **ABSTRACT**

In 2003, the Institute of Physics introduced a Site Visit scheme, in which selected panels visited physics departments and produced a dedicated report on their "gender inclusiveness". After two years, the results of these visits were condensed into a general report: *Women in University Physics Departments: a Site Visit Scheme*. Building upon the best practice identified in this influential report, the IoP has established the JUNO Code of Practice that aims to advance the careers of women in higher education physics. The Code gives departments specific actions to improve the participation and retention of women, based on five core principles. The principle aims of the scheme are to develop an equitable working culture in which students and staff, men and women, can achieve their full potential; to allow assessment of gender equality performance against a robust framework; and to promote open discussion of gender and other equality issues. Departments participating in the scheme are allowed to use the JUNO logo in their publicity and those demonstrating their adherence to the core principles may promote themselves as JUNO CHAMPIONS. The scheme shows how professional bodies can have a major impact in promoting gender equality.

### **KEYWORDS**

Gender; universities; professional bodies; audit



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## INTRODUCTION

In common with many countries, the UK has difficulty in attracting women into physics and engineering. Only a little over 20% of the students who study physics beyond the age of 16 are female; consequently, there are a number of schemes to try to encourage girls to continue with the subject (for a review of this subject, see Murphy and Whitelegg, 2006). There is a more general problem, however, which is shared by almost all academic subjects: the proportion of women progressing to more senior posts reduces as they move from lecturers, to senior lecturers/readers and through to professors, as shown in Figure 1.

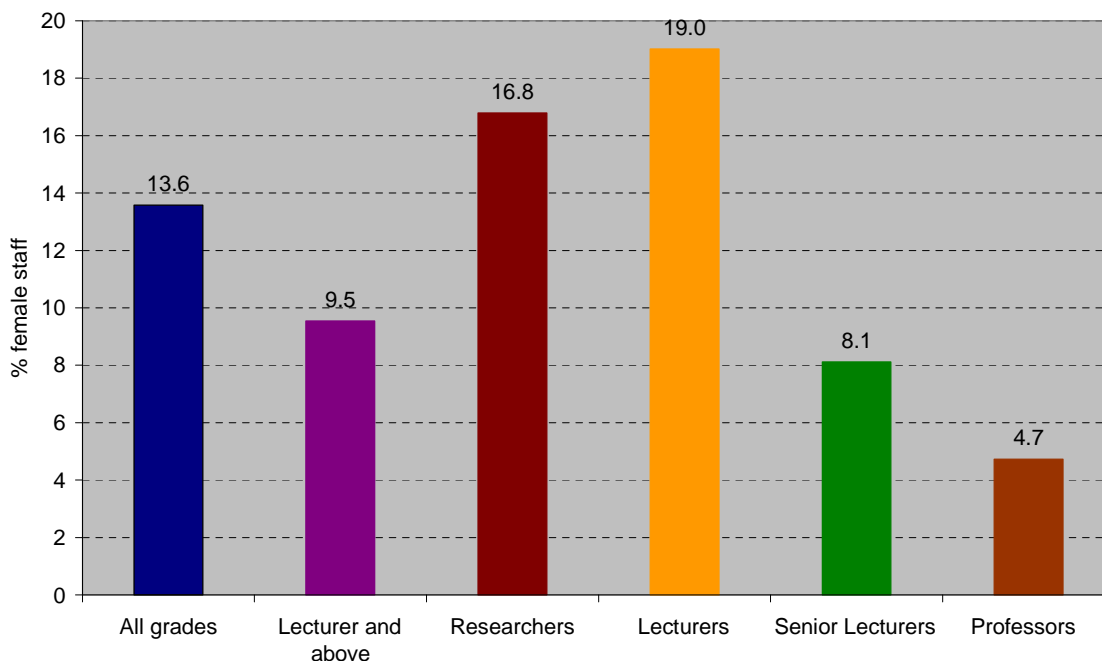


Figure 1: Percentage of female academic staff in UK physics departments

The Institute of Physics (IoP) has a longstanding interest in diversity issues. Its [Women in Physics Group](#) is a self-organising network of members with interests in gender issues. Partly due to the existence of this group and in response to the first International Conference on Women in Physics in 2002, the IoP established a Women in Physics Programme, which, in 2004, became its Diversity Programme; there are two members of staff dedicated to this work.

In this article, we describe PROJECT JUNO, an initiative that has been developed as part of the Diversity Programme, and which builds upon a

series of university site visits carried out by the IoP. This voluntary scheme for university physics departments aims to improve their gender friendliness and the career progression of women, by setting out practical advice and guidance. We also reflect on how projects such as this contribute to the recruitment and retention of women within UK university science departments.

### **UNIVERSITY SITE VISITS.**

The [American Physical Society](#) has been offering a [site visit scheme](#) for many years. Following a visit to the US, a senior woman physics professor made a presentation about this scheme to the heads of UK physics departments at one of their twice-yearly meetings held at the IoP. The response of the largely male audience was interesting, varying from the supportive, through the sceptical to the downright hostile. One major perception that needed to be overcome was that this was not even an issue. The most powerful argument put forward in support of the site visit scheme, however, was the clear loss of talent of women in the academic pipeline.

Following this meeting, the IoP wrote to the heads of all 47 physics departments in the UK offering the opportunity to participate in a site visit scheme. Sixteen departments choose to participate in the scheme. The visits involved an external panel of between four and six people, who were all members or staff of the IoP and who participated on a voluntary basis. The panels always included at least one man to ensure that the visits were not seen as being biased from the outset. The panel spent a whole day on site, mainly talking informally and confidentially to senior management, all levels of academic and research staff, including post-docs, and postgraduate students, holding discussions with male and female staff separately. By and large, both the visiting teams and the departments regarded these visits as friendly, constructive events, reflecting an important theme in this work. We would argue that because the panels were physicists themselves, they were seen less as an external auditing team and more as a group of friends offering advice, a strength of professional body involvement. As an obviously neutral friend, known and respected by the department, the IoP was able to gather information in a manner that would be difficult for an unknown outside body and essentially impossible for an internal audit.

At the end of each visit, a semi-formal report was agreed by the panel and given confidentially to the relevant head of department. Items of good practice were highlighted as well as any issues the panel believed needed to be addressed, with positive suggestions on how the situation could be improved. Since the visits were by invitation only, the IoP was not able to impose any requirements. In almost every case, however, the reports were discussed openly and six departments sent a response to the IoP. These responses outlined how the departments were addressing the issues raised. Indeed, one of the most important legacies of the visits was that gender issues were raised and discussed in physics departments, in many cases for

the first time.

The visits themselves uncovered some serious issues. Although infrequent, several cases of sexual harassment were reported. Some of these were quite unknown by the department management, although every university visited had an explicit HR mechanism for dealing with such cases. Even more worrying, in one incident, where the management did know about the harassment, the matter had not been dealt with properly.

The panels also found evidence that women frequently felt excluded by cultural issues. In some departments social interaction for postgraduate students revolved around football and drinking, to the exclusion of women. In one case, a woman from an Islamic background felt completely isolated. At higher levels, many women expressed the view that senior university management was 'unnecessarily aggressive' and confrontational and, for that reason, they were reluctant to become involved in more general university activities.

The visits managed to unearth information that was previously unknown to the department, which demonstrated that there were serious problems with procedures that were thought to be working well. One of the recurring themes that emerged from almost all of the visits was the discrepancy between what departmental and HR managers asserted was the situation, what was the real state of affairs that emerged when the visiting panel spoke to the various members of the department, and what the perceptions of the staff were. A typical example might be that someone in management would say that all staff at all grades were appraised every year. Then the panel would speak to the research staff and find someone who had never been appraised, and another member of staff who would say that the appraisal scheme was not compulsory. Another example was a head of department saying that promotion procedures were fair and transparent only for it to emerge that some women thought that male candidates were being favoured.

More information on the examples above can be found in the report that was published by the IoP at the end of the site visit scheme (IoP, 2006a). This report was widely distributed, to all physics departments, professional bodies in the UK and other relevant women in SET organisations, and has influenced other professional bodies in other subjects, both in the UK and in other countries. In addition, we are aware of departments that did not participate in the site visit scheme, but who did read the report, and subsequently made changes in line with its recommendations. Indeed, when the IoP launched its Project JUNO Scheme in 2007, of the initial ten departments that signed up to be Supporters, only 4 had taken part in the site visit scheme. The IoP now has 22 Supporters and only 4 out of the original sixteen departments that were visited have not signed up. One department in the latter category said that the reason for this was because they felt that the 2-year deadline for

Champion status was not achievable for them at the current time.

### **PROJECT JUNO**

The report on the site visits was a major step. By coincidence, in 2005, there was an international review of physics research in the UK (IoP, 2006b). The report drew attention to the low proportion of female academics and called upon the IoP, among others, to try to remedy the shortage. In order to both take forward the recommendations from the review and to build on the site visit work, we decided to develop a Code of Practice (IoP, 2007), based around five principles which were identified through the good practice already acknowledged in our site visit report. The five principles are:

1. A robust organisational framework to deliver equality of opportunity and reward
2. Appointment, promotion and selection processes and procedures that encourage men and women to apply for academic posts at all levels
3. Departmental structures and systems that support and encourage the career progression of all staff and enable men and women to progress and continue in their careers
4. A departmental organisation, structure, management arrangements and culture that are open, inclusive and transparent and encourage the participation of all staff
5. Flexible approaches and provisions that enable individuals, at all career and life stages, to optimise their contribution to SET, their department and institution.

For each principle, there are also key actions and a set of assessment criteria covering all of the good practice areas identified. Departments have to establish a strong evidence base and action plan (principle 1), implement transparent promotion and recruitment procedures, taking positive action as appropriate (principle 2), ensure there are proactive processes for appraisal and development (principle 3), promote an inclusive management culture (principle 4) and adopt flexible working practices throughout the whole department (principle 5).

Although Project Juno is specifically for physics departments, the criteria define a benchmark of good practice that is applicable to almost any subject, particularly in the science area, which is useful even if departments go no further with the scheme. For those who do wish to participate in the scheme, the first step is for departments to affirm their support for the principles by sending a letter to the IoP signed by university senior management confirming they wish to become a Juno Supporter. In the original formulation of the scheme, the departments then had two years to submit a formal application for Champion status to the Juno Assessment Panel. The application had to demonstrate that they were satisfying the majority of the assessment criteria, which would enable them to use the JUNO Champion logo (see Figure 2).

Figure 2: JUNO logos

Following the first few applications for Champion status, it became obvious that the step from Supporter to Champion was too great for most institutions, given the demands of embedding the five principles throughout the department and the resources required to do this. Therefore, from November 2009, we are introducing an intermediate step, JUNO Practitioner, for which a department must show that it has set up processes to move towards meeting the criteria. These processes would include, for example, putting together a 'Juno Committee' and formalising an action plan and methods of measuring impact.

Currently we have 22 physics departments signed up as JUNO Supporters, with many more showing strong interest: there are at least 3 more departments who have expressed a recent interest in becoming a Supporter. We are hoping that the introduction of the new intermediate Practitioner status will ease the daunting task of implementing and embedding, and then evidencing, the five principles. Our aim is for all UK physics departments to be part of the scheme. In the summer of 2009, the first two physics departments, University of Warwick and Imperial College achieved Juno Champion status. Both Champions have commented on how useful participating in the scheme has been for embedding good practice in their departments. Professor Malcolm Cooper, Head of Physics at the University of Warwick, said, "At Warwick we have tried to create flexible and transparent processes which encourage everyone, male and female, to achieve their ambitions. We have been fortunate to have female role models in all areas and at all levels who demonstrate that gender is no bar to success".

### **WORKING WITH OTHERS**

Recent legislation in the UK, such as the Gender Equality Duty (Department for Communities and Local Government, 2007) has tended to insist that public institutions have to be *proactive* rather than *reactive* in dealing with issues such as gender, ethnicity, disability etc. Therefore, it is not sufficient to react to a particular issue, one needs to anticipate it and have procedures in place that ensure fairness and remove discrimination. Consequently, universities take these matters seriously, not least to avoid potential legal challenges.

In dealing with gender issues, the [Athena SWAN Charter](#), which is aimed at all SET departments and not just physics, has very similar principles to JUNO and has a similar set of levels, in their case, Bronze, Silver and Gold.

However, the Bronze award is a university-level award and this must be achieved before a department can then progress individually to Silver or Gold. As a result, the scheme tends to be organised in a top-down approach, with central university administration, usually the HR department leading the way. While this is an excellent way of ensuring the essential commitment from senior university management, it does have the major drawback of not being 'owned' by staff in the department, who can perceive this is an imposition. We would also argue that, because of this top-down approach there is the potential for this scheme to be subject to the discrepancy between management assertions and the reality in the department that was so visible in our site visits. The JUNO Champion award is equivalent to Athena SWAN silver and we have developed 'fast-track' routes between the two schemes. JUNO has a specific advantage for physics departments in that, as it is solely a departmental award, physics departments are not reliant on their universities achieving a general Bronze award first. Nevertheless, the IoP is keen for physics departments to use JUNO as leverage to encourage their universities to participate in the Athena SWAN initiative and raise the profile of women in SET as a whole.

The Royal Society of Chemistry (RSC) has a good practice guide (RSC, 2004), with similar principles to JUNO and other professional societies, such as the London Mathematical Society and the Royal Academy of Engineering, are interested in developing their own schemes. Both the IoP and the RSC are working closely with the Athena SWAN team to ensure that universities see what we are doing as coherent and complementary, and that there is no confusion between the particular schemes. Together we have formed the *Athena Partnership*, along with the [UK Resource Centre for Women in SET](#), not only to promote the various specific programmes, such as JUNO, but also to offer resources to help departments make progress in this area. For example, one of the major problems for a department is to be able to compare its environment and performance with those of other institutions; therefore, we offer benchmarking tools to allow that comparison to be made. The tools might just be statistical, say on the number of female professors, or more qualitative, for example, the way one deals with career breaks.

The *Athena Partnership* also offers site visits but, whereas the original IoP site visits as described in section 2, tended to identify good practice and any problem areas, these serve a more advisory function, working with the staff in the departments, possibly taking them forward towards JUNO or some other form of accreditation. The hope is that, over time, other professional bodies will join the partnership, possibly using the JUNO brand. Although many of them do not have the resources enjoyed by the RSC and the IoP, the Partnership allows them to build upon all the existing work and to offer support to their member groups at relatively little cost.

As a final point, we have also tried to transfer the elements of our work in universities to private companies by initiating a similar site visit scheme in

industry, jointly with the UK Resource Centre for Women in SET. Although there has been one very successful visit, in general it has been too difficult to persuade companies to take part. Although they do see the value of the scheme, we believe that the management culture is so different, often with the added complication of trade unions, that they may be worried that the visits would raise expectations of change that they would not be able to fulfil and that they might then be vilified for having poor practice.

## **SUMMARY**

There is frequently a large difference between what universities claim to be the case with regards to equal opportunities practices and what is actually happening in the departments. Externally-based schemes can be an excellent way of monitoring real behaviour, provided the external body has the trust of both management and staff. Genuine culture change needs both commitment from senior management, that is, someone championing the cause at a high level, and support from all levels of staff and students of the department. Direct impact of these schemes can often be difficult to measure, given the time lag between raising awareness and changing practice and this then feeding through to increased numbers of female physicists. Nevertheless, taking part in such schemes and implementing good practice benefits everyone, not just female members of staff. By raising the profile of gender issues, we can ensure they are discussed both formally and informally at the departmental level. There are drawbacks, however, in that the scheme has no real 'carrot or stick' as departments are free to choose whether they participate in it at all. In addition, there are ramifications on workload and resources; departments must find staff willing to take on the additional work of progressing the JUNO agenda and resource the resulting activities accordingly.

Redressing the gender imbalance in physics is not a simple or straightforward process and although significant work in understanding the issues and identifying good practice has already been completed, challenges still lie ahead in embedding these changes throughout physics departments. Nevertheless, professional bodies, such as the IoP, are ideally placed to deliver such schemes. They are well known to everyone in the departments, from the heads to the undergraduate students, most of whom are members. In addition, they have a reputation for independence and trust. It is difficult to see any other types of organisation that could do the job so well.

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