

2016 Minerva Informatics Equality Award

Careers of Female Faculty

Nominated Department - contact details

Name of university: University College London (UCL)

Department: Computer Science (CS)

Date of application: 2016

Contacts for application: John Shawe-Taylor (Head of Department), Ivana Drobnyak and Alexandra Silva (Athena Swan team co-leads). *Note: In the UK, the Athena SWAN Charter was established in 2005 to encourage and recognise commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) employment in higher education and research. The CS department at UCL has an Athena Swan self evaluation team.*

Email: j.shawe-taylor@ucl.ac.uk; i.drobnyak@ucl.ac.uk; alexandra.silva@ucl.ac.uk

Telephone: 020 7679 7680

Departmental website address: <http://www.cs.ucl.ac.uk>

Brief Summary

The Computer Science (CS) Department at University College London has been promoting initiatives in the last years to encourage and support the careers of women in CS. We are one of only three CS Departments in the UK to have achieved an Athena Swan Silver Award – none have as yet been awarded Gold. The Silver Award recognises that we have gone beyond simply identifying problem areas in relation to gender inequality, but that we have been successful in implementing strategies that address these issues and furthermore have been able to measure our progress towards our goals.

Letter of endorsement from the head of department *(though this is not an official part of the application form, we believe it provides valuable context to other activities and kindly request the committee to include it as extra supporting material)*

Dear Sir/Madam,

I offer my wholehearted support for the UCL Computer Science submission for a Minerva Informatics Equality Award. Computer Science (CS) as a discipline has struggled with gender inequality in many parts of the world not least in the UK. This is the result of quite complex associations and messages that are sometimes difficult to unravel; but the result has been an enormous loss of talent to the subject. The CS department at UCL has a Self Assessment Team (SAT) whose main goals have been to better understand and provide solutions to these problems. My personal involvement in the process has been extremely gratifying and I am proud of the progress we have made on a number of fronts as outlined in the main part of our submission.

We have organised ourselves around four sets of activities: ARRIVE –attracting girls aged 12-18 to CS, ASPIRE – supporting and encouraging our female CS students throughout their academic experience, ACHIEVE - encouraging female undergraduates in CS to get top degrees, and ADVANCE – increasing numbers of CS female academics. *For the purpose of this submission the ADVANCE efforts are the relevant ones, but I briefly describe the others to give you further context to our activities as a whole.*

Our ARRIVE efforts have been extensive through engagement with schools and promotion of the subject more broadly. The long-term goals of our efforts are to promote CS as an attractive subject and career prospect for women, and as a consequence to increase our female application numbers significantly.

Women taking our CS degrees have started to play much more prominent roles in project teams and other activities that form part of our undergraduate degree. We see this as evidence that our ASPIRE work is bearing fruit. It is probably also directly as a result of this greater engagement and confidence that the proportion of women obtaining firsts has been completely transformed, from a low point of 0% 5 years ago to 45% this past year, showing that we are making progress with ACHIEVE.

Our efforts under the ADVANCE initiative have been directed towards increasing the number of female lecturers and to achieve subsequent promotions through the ranks. I am very happy to report that this year's promotion round has been outstanding. Out of six newly promoted professors, three are female, two based in CS and one in Psychology and Language Sciences but working within the UCL Interaction Centre based in CS. Furthermore, two of our seven new senior lecturers are women.

While there is without doubt a long way to go before we can truly say we are realising the potential of female CS talent in equal measure to that of males, I do believe that the last three years have seen us take very significant steps towards achieving this overarching goal. I look forward to carrying forward our new plans and actions and reaping the benefits of the hard work that you will find reported below.

I am happy to confirm that the information presented in this application, including quantitative and qualitative data, is an honest, accurate and true representation of the department.

John Shawe-Taylor, Professor of Computational Statistics and Machine Learning, Head of Department of Computer Science

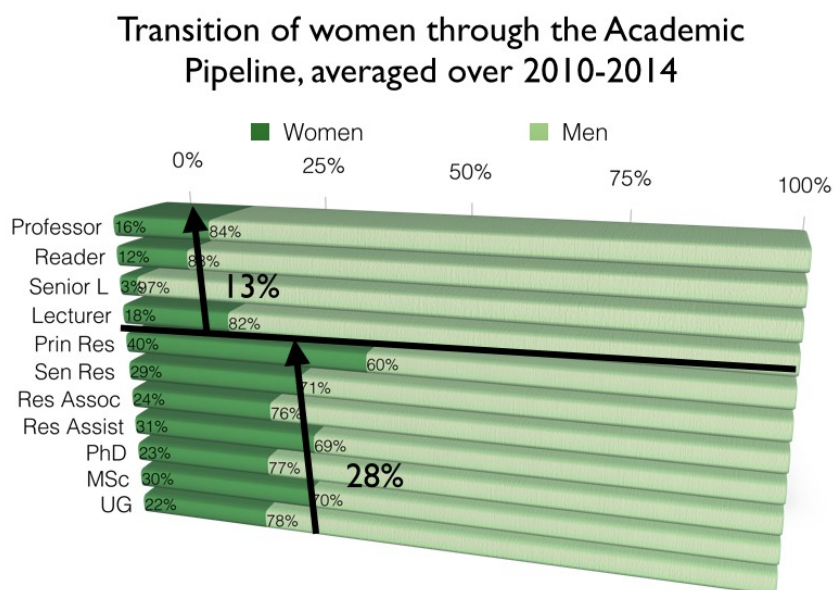
Description and evaluation of initiative

ADVANCE – Progression in our department has been disproportionately weighted toward men. The ratio of men to women gets worse as you climb the ranks. Our overall aim is to see equality in male and female progression. The ADVANCE initiative includes several action goals:

1. Help women get a fellowship
2. Help women get a lectureship
3. Help women get promoted

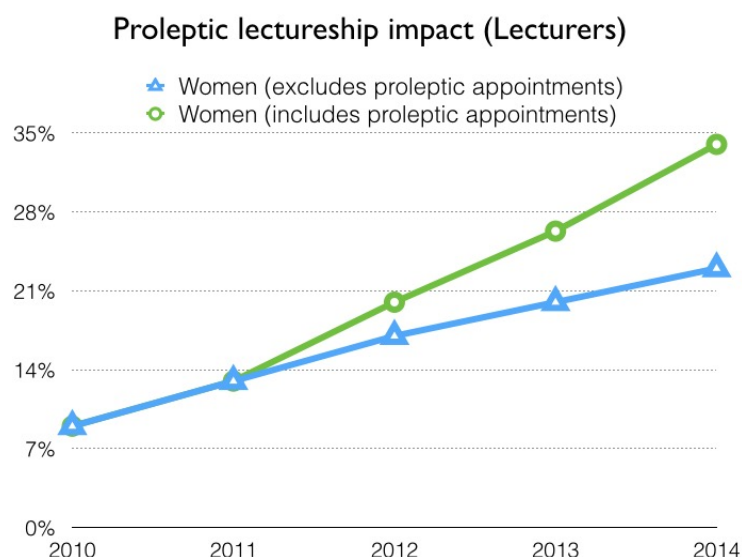
which we describe and evaluate next.

A key point of attrition of female staff in the department is the transition from research staff to academic staff. Academic posts are permanent whereas research posts are open ended with a funding end date. As can be seen in the pipeline figure below, over 5 years, there is an average drop from approximately 28% of women in student and research posts (non-permanent) to 13% of women in academic posts (permanent). Hence, our ADVANCE initiative addresses this transition and focuses on increasing the number of women at the lecturer level by use of the ***Proleptic Lectureship Scheme***.



The Proleptic Lectureship Scheme (PLS) is a way of “promoting” talented Research Fellows (researchers on independent external fellowships) within the department (and wider), to a Proleptic Lectureship post, which automatically turns into an Academic post once their fellowship is finished. Not every Research Fellow will obtain a Proleptic Lectureship, the selection is based on the academic merits expected for that stage in the individual’s career. The scheme is open to women and men.

We started the implementation of the scheme 3 years ago, and found it to be equally successful for women and men. In 2012 we had 2 male and 1 female proleptic lecturers (PL), in 2013 we had 2 male and 2 female PLs. In 2014, one female PL and one male PL were transferred to permanent academic posts (Lecturer and Reader respectively). That same year, 3 new PLs joined (two male and one female), making a total of 3 male and 2 female PLs for 2014. When these numbers are included in the total academic staff count, the percentages of female lecturers are boosted as shown in the graph below.



We believe that the PLS suits women as commonly the transition to academic posts happens during the 30's, when women usually decide to have children and are not very keen to change city or country in search of the very rare permanent posts. It allows them to stay in one place and start families. The department offered three women Proleptic Lectureships in 2012-14, and all three women had children the following year while they were still Fellows. This guarantee of a permanent post gave them the necessary stability and security for their career and family.

Once on the Academic track, staff have a number of challenges they face at different stages of their career. These include work-related stresses arising from increasing responsibilities, and also challenges outside of work. Junior members of academic staff have formal mentoring as part of their probation process. However, after that there is no formal mentoring in place. We discovered through talking with female academics that some of them did not know one another, and that instead of having formal randomly assigned mentors, most preferred having stronger social interaction and informal mentoring that can arise from developing spontaneous relationships.

Having an independent externally funded fellowship is a necessary requirement for having a chance of a proleptic lectureship and also improves a researcher's chances of obtaining an academic post using the more traditional application routes. **ADVANCE puts in place annual fellowship training workshops open to all CS PhD students and postdocs.**

Promotion

In order to ensure equal consideration, all non-professorial members of staff are required to submit their CVs for consideration in a yearly meeting of the departmental professors together with any Heads of Group (HoG) who are not professors. This goes beyond the standard UCL process which requires individuals to put forward an application to their HoD. Previously the professorial committee would review only those non-professorial academic staff who submitted their CVs, and those considered worthy would be invited to apply for promotion. However the survey results from 2013 indicated that only 51% of the staff members were satisfied with the process, 51% males and 45% females.

The results of the survey prompted the Department to change its promotion procedures to that described above in which all non-professorial staff are required to submit their CVs and feedback is provided whether promotion is recommended or not. This feedback process is being further formalised into an appraisal starting this year. The promotion criteria have

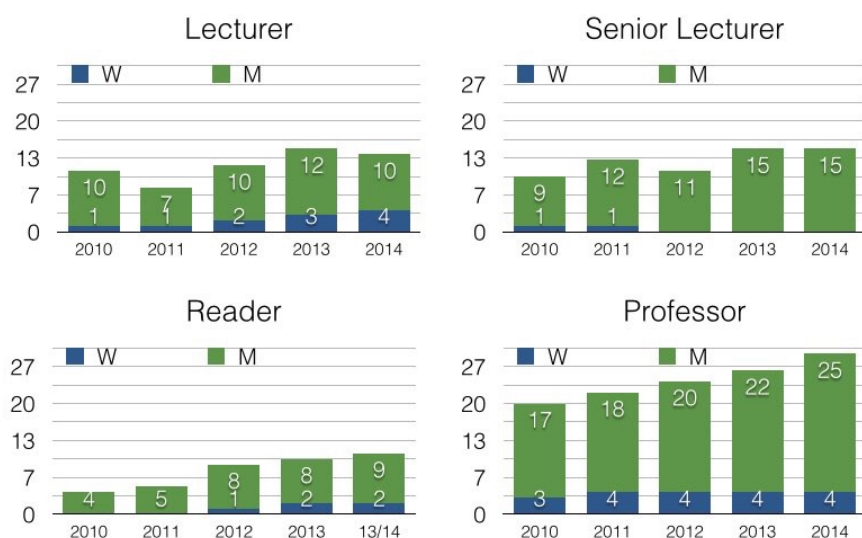
remained unchanged recognising excellence in teaching, research, administration, pastoral and outreach work.

This larger evaluation group was chosen to ensure that there is no bias created through, for example, differences in propensity for self-promotion. Potential candidates for promotion are identified by this group through a rigorous reviewing process that provides feedback to all staff through their HoG. Those identified are then invited to apply and appropriate letters of support are supplied by the HoD with suitable reference letter writers identified with the help of HoG. An unconscious bias training workshop was offered in the CS department in early 2015. UCL's Head of Equalities and Diversity conducted the workshop which covered unconscious bias in student recruitment, academic staff recruitment and academic staff promotion, with attendees required to complete a pre-course task of the Harvard Implicit tests (Project Implicit). 7 out of the 11 attendees were professors (who have an active role in the promotion process). A similar workshop will be offered to the entire department each year.

From October 2010 to October 2014, 25 applications for promotion of Academic Staff were submitted (24 male and 1 female). They were all successful except one male applicant. The female promotion was from Senior Lecturer to Reader.

The difference in the number of male and female promotions is large (24 to 1), however from looking at the figure below, we can see that there is an extremely small pool of women who can apply, i.e. those not already professors. On the other hand, there has been a very large pool of men who could apply since 2010, and the number of promotions reflects this difference. **Hence our main ADVANCE action is to increase the pool of women in the first place.**

ACADEMIC STAFF



Career Development

UCL staff are expected to take part in the Appraisal, Review and Development Scheme. Normally, each staff member has an appraisal meeting with his or her line manager each year (no less frequently than every two years). The scheme's aim is for all members of staff to understand the department's expectations of them, to have an opportunity for detailed discussion of their contributions, and to feel valued. This scheme also includes an opportunity for identifying training and development needs and ensuring that they are met. Interestingly, our records show that female line managers are consistently good at carrying out regular appraisal meetings with the staff they line manage.

In the survey in 2013, 69% of CS survey respondents had received such a review in the last 24 months. Notably, more males (71%) than females (61%) reported having received a review. Reasons for this are unclear. Encouragingly, those that had received an appraisal found it useful:

“My last appraisal set work objectives for the coming appraisal period and led to me developing my skills (if required) to help me achieve those objectives.” 64% positive (68% males and 57% females).

“My last appraisal accurately recorded how I had achieved against my work objectives over the preceding period and helped identify and manage any barriers to meeting those objectives.” 73% positive (77% males and 64% females).

However, a higher proportion of men than women indicating satisfaction in their appraisal suggests that the appraisals may not be designed to equally benefit males and females. Since the survey, the department has been examining and revising the appraisals and the promotion process. Since the next UCL survey is being administered November 2015, we will be analysing the new data and comparing it to the previous survey.

Further Remarks

The ADVANCE initiative includes other measures, related to department culture and flexibility in managing career breaks, which we briefly mention below. A document containing details on all our activities and evaluations thereof is available at <http://alexandrasilva.org/files/AS-Silver-2016.pdf>.

- *Timing of departmental meetings and social gatherings:* Core meeting hours are between 10am and 4pm. Departmental and Group meetings are encouraged during the lunch hour 1pm – 2pm where there is no teaching in the department's teaching timetable. Away Days are generally held over two days and are residential, with an option for staff to go home after day one and return on day two. Away Days do not start before 10am.
- *Flexibility and managing career breaks:* Since 2007 our department has experienced a 100% return rate following maternity leave. The numbers of female staff taking maternity leave is relatively small, however all are supported to return to work under conditions suited to their family commitments and in line with our flexible working policy. Before going on maternity leave, staff have a number of options to choose from in order to make the pregnancy period more manageable. They can either work from home once the travelling becomes too hard, or use some of their annual leave, or take sick leave in case the pregnancy is difficult and prevents them from working. In order to help maternity returners get back up-to speed with their work the Department set up a **Post-Break Award**. The award is especially designed to provide grants after large breaks, such as maternity leave. It has a value of £10000 and is meant to help with getting the awardee's research back up-to speed once the leave has finished. Flexible working is arranged both formally and informally within the department so accurate numbers are not available. Managers do not have any formal training in managing and promoting flexible working hours, however based on numerous individual examples and excellent survey results as shown above, our department has a very good record in supporting flexible hours.

Two letters of support

Ivana Drobnjak I have been a Lecturer at UCL's Department of Computer Science (CS) since January 2015, having joined the department in 2009 as a Postdoctoral Researcher on a 3 year fixed term contract funded by the EPSRC project grant of my supervisor. In 2012 I was awarded a 3-year Leverhulme Trust Fellowship and one of the key steps for me after becoming a Fellow was to be considered by CS for the position of Proleptic Lecturer, which would guarantee me a lectureship at the end of my fellowship. This went through in 2012 which meant that I did not have to apply for permanent jobs elsewhere, did not have to move locations, and hence could spend some time focusing on starting my family without these additional stresses.

I now have three children, Nina (4 years old) and twins Alex and Marianne (2 years). The Department has been extremely supportive throughout, enabling me to develop both my career and maintain my family life. In addition to the excellent structure that encouraged my career path, the CS department has been an extremely friendly and supportive place to have children. I took 2 fully paid maternity leaves (4 maternity + 2 annual months) for both my pregnancies and was advised by the very friendly administrative staff throughout. I also always felt that my having a baby was looked upon with kindness and shared excitement. My colleagues at the department were very friendly and supportive, and I often had my babies sleeping next to me in meetings. After both maternity leaves I chose to work full time, but had quite a few days working from home when the babies were not well. Everybody was very comfortable with this arrangement.

The Department's Post-Break award of £10,000 for people who are coming back from a prolonged break was enormously helpful. I received this after both my maternity leaves and could afford to hire a research assistant for a few months to get up to speed with my research. These support mechanisms had been put in place with the strong support of our Head of Department (HoD) who was instrumental in finding funds for the Post-Break award, in encouraging Proleptic Lectureships, and in general always being there to hear and support new ideas.

As part of our Athena SWAN activities, I organise monthly Ladies Tea-time socials in the Department and hear lots of stories by other female academics who always praise the department for enabling work-life balance, for encouraging high quality research and teaching over grant applications, and for caring about science, quality of life and sustainable harmonious solutions. In one instance, when one of our female academics on maternity leave announced she would be back after one month, our HoD made sure she knew there was no pressure by the department to do so and that she should take as long as she felt comfortable with. I believe that it is this attitude and the department's support that enhances our quality of life and makes the department a very female-friendly place to work.

Licia Capra I joined the Department of Computer Science at UCL as a Lecturer in 2005, and was promoted to Senior Lecturer in 2009, Reader in 2012, and Professor in 2015. I always found the college-wide promotion process very transparent, the criteria clear, and the department very supportive and helpful. However, something has changed over the years, which I found extraordinary.

I remember back in the autumn 2008 approaching the Head of Department, to ask whether he would support my case for promotion in the upcoming promotion round. He asked me to send him my CV, and we then had a very constructive 1-to-1 meeting, at the end of which he enthusiastically said he would support my case. I submitted my case for promotion in November 2008, and was promoted to Senior Lecturer effective October 2009. The whole process felt fair,

transparent, and the overall experience was very good. What happened for two subsequent promotion rounds I went through was even better.

For the past few years, the department has put in place a process whereby, each autumn, every member of the research/academic staff has to prepare their CVs and send them to their Head of Research Groups (HoRGs). During a meeting with the Head of Department and all HoRGs, everyone's case/CV is discussed. Individuals who are deemed ready for promotion are then encouraged to prepare a full promotion case and submit in that year's round of promotions. Those who are considered not yet ready for promotion are given constructive feedback on what areas need strengthening, to move forward.

I personally found this procedure extremely positive. First, I received constructive feedback from experienced colleagues every year on whether I was progressing well with my career and what areas needed improvements. Second, I did not have to make a judgement call all by myself as to whether I was ready or not for promotion (and then approach the Head of Department to ask him to support my case). Rather, more experienced colleagues looked over my CV and collectively assessed whether they thought I was ready. In the end, I went for promotion to both Reader and then Professor at least a year earlier than I would have, had I made the call solely by myself.