1. Letter of endorsement from the head of department: maximum 500 words

An accompanying letter of endorsement from the head of department should explain how the SWAN action plan and activities in the department contribute to the overall department strategy and academic mission.

The letter is an opportunity for the head of department to confirm their support for the application and to endorse and commend any women and STEMM activities that have made a significant contribution to the achievement of the departmental mission.

2. The self-assessment process: maximum 1000 words

Describe the Self-Assessment Process. This should include:

(a) A description of the self-assessment team: members' roles (within the university, within the department, and as part of the self assessment team) and their experiences of work-life balance.

The SAT members listed below cover a range of career stages, some with parental responsibilities, and include both academic and administrative staff and one PhD student. Four of the 9 Department SAT team members are male, and a range of different nationalities are represented: Irish, Australian, British, Russian. All members were involved in analysing data, designing the resulting action plan and preparing this submission.

Bonita Carboo (Administrator) joined UCL Department of Mathematics in February 2008 as a Secretary. The role has since undergone a review, and she is now Examinations Liaison Officer/ MSc Administrator (MSc Mathematical Modelling programme). She has four children (all adults now) and a 2 year old granddaughter.

Rod Halburd (Professor) joined UCL as a Reader and EPSRC Advanced Research Fellow in 2007 and was promoted to Professor in 2010. His wife is a Senior Lecturer at UCL and they have an 8 year old son. They live outside London and both work full time but have sufficient flexibility to ensure that one of them can take their son to school and one can pick him up from after school club. Rod and his family featured in UCL's '*Guidance on Supporting Working Parents and Carers'* booklet published in 2013.

Helen Higgins is the Departmental Equal Opportunities Liaison Officer and Departmental Administrator. Helen takes an active interest in all equalities matters in the Department and more widely at UCL, for example, as a member of the race equality group. Helen is line manger to the departmental administration team which includes a full-time member of the team who returned to work on a job-share basis, post maternity leave. Helen is a single parent who joined the Department in 1995 and became Departmental Administrator in 2001.

Richard Hill (Reader) is a number theorist. He joined UCL in 1994. He shares the care of his one child with his wife, who also works full-time. His son has attended UCL day nursery for a number of years.

Louise Jottrand (PhD student) Louise was both an UG and PhD student in the Department. As a PhD student she sat on the staff-student PGR committee. She left UCL in spring 2013 for a PDRA position in Vienna. Louise took responsibility for running the surveys reported in this document.

Robb McDonald (Professor, HoD and Chair of SAT) joined UCL in 1994 and was appointed Head of Department in 2011. He was a member of UCL's Athena SWAN Bronze institutional award renewal group and joined UCL's 50:50 Gender Equality Group in March 2013. He has acted as a

special mentor for undergraduates with Asperger's. He has received specialized training in unconscious bias awareness, grievance and disciplinary hearings, and conflict resolution skills.

Karen Page is a Mathematical Biologist. She joined UCL in 2001 as a Lecturer in the Department of Computer Science, moved to the Department of Mathematics in 2006 and was promoted to Reader in 2010. Her husband lives in Barcelona.

Nadia Sidorova (Reader) joined UCL as a Lecturer in 2007 and was promoted to Senior Lecturer in 2012 and Reader in 2013. Her research area of expertise is probability.

Alexey Zaikin (0.5 FTE Professor in Mathematics and 0.5 FTE in the Institute of Women's Health) has held academic positions in Moscow, Exeter, Potsdam and Essex before joining UCL in 2008 as Chair of Computational and Systems Medicine. He leads a research group of 6 people, 3 of whom are female.

2.1 Action: Recruit new PhD student to the SAT to replace Louise Jottrand.

(b) An account of the self-assessment process: details of the self-assessment team meetings, including any consultation processes that were undertaken with STEMM departments that hold and/or are working towards Athena SWAN awards, and how these have fed into the submission.

The self-assessment team (SAT) was assembled in Autumn 2011-12 and first met March 2012, and has met at least once per term since then. Members of the SAT attended workshops and seminars on Athena SWAN award preparation put on by UCL and the London Mathematical Society (LMS), the latter providing an opportunity to share ideas with other UK mathematics departments. Ideas for good practice were also discussed with other UCL departments preparing Athena SWAN award bids e.g. Chemistry. The SAT identified areas of current good practice, discussed the data presented in this submission, identified areas requiring attention and formulated actions to address them. The SAT also devised, implemented and diagnosed results of the UG and PGR surveys as discussed in this document.

One of the first tasks of the SAT was to respond to the comprehensive 2012 survey commissioned by the London Mathematical Society (LMS) making us one of 30 UK mathematics departments to complete the survey. This led to the publication of the report '*Advancing Women in Mathematics: Good practice in UK University Department*s' launched in the House of Commons in February 2013.

(c) Plans for the future of the self-assessment team, such as how often the team will continue to meet and any reporting mechanisms.

The SAT will continue to meet termly (3 times per year) to ensure that the actions detailed here are carried out, monitor their effectiveness and identify new areas demanding action. Refreshing committee membership will be considered annually. Reports from the SAT will become a standing agenda item at all-staff meetings from 2013-14. We also plan to run the UG survey annually (Action 4.3) and PGR survey every 2 years (Action 2.3). It is our eventual ambition that following successful implementation of the action plan detailed here, along with continuing self-assessment and formulation and implementation of future actions will lead us to apply for a Gold award

Action 2.2: Reports from the Department's Athena SWAN SAT to become a standing agenda item at all-staff meetings.

Action 2.3: Repeat PGR survey (see Sec. 4) every two years.

Please note that this document only includes data up to 1 Oct 2013; in particular it does not include 2013-14 student data.

[983 words]

3. A picture of the department: maximum 2000 words

a) *Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features.*

The Department, established in 1826, is one of the founding departments of UCL; the first university institution to be founded in London and the first in England to be established on an entirely secular basis, and to admit students regardless of their religion and women on equal terms as men.

Since its beginning, mathematics at UCL has been enhanced by many outstanding members of staff. Indeed two of its students (and later staff) Professor Klaus Roth (1958) and Professor Alan Baker (1970) have gone on to win the Fields Medal, the mathematician's equivalent of the Nobel Prize. Another former member of staff, Professor Sir Tim Gowers, won the Fields Medal in 1998 for work he did at UCL.

We believe that Emeritus Professor Susan Brown, appointed to a Chair at UCL in 1987, was the first female professor (of mathematics) in a UK mathematics department (not including female professors of statistics in mathematics departments). While this is a source of pride for the Department, it is equally shocking that, if true, it took until the late 80s for the UK to have its first female professor of mathematics. More recently, Marianna Csornyei was recruited to a Chair in Pure Mathematics at UCL in 2003 at the age of 27. She left in 2011 for a position at the University of Chicago (one of the world's leading mathematics departments).

In June 2013 there were 45 permanent academic staff, 9 research staff, 10 administrative staff, 615 UG students, 32 PGT and 46 PGR students. Research covers areas such as analysis and its applications, geometry, number theory, fluid mechanics, mathematical biology and mathematical modelling in industry and finance. UCL has a separate Department of Statistical Science and staff and students in that department are not included in this submission (except for students on the joint mathematics and statistics UG programme). The Department is one of 7 which comprise the Faculty of Mathematical and Physical Sciences (MAPS). The Department does significant teaching outside of MAPS e.g. courses for large numbers of engineering and economics students. It also teaches mathematics on the new Arts and Sciences degree, an innovative 'liberal arts' style programme launched in 2012-13. We are proud that the lecturer on this programme Mr Adam Townsend, a Postgraduate Teaching Assistant, won a Provost's Teaching Award for excellence and innovation in teaching.

b) *Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.*

Student data

(i) **Numbers of males and females on access or foundation courses** – *comment on the data and describe any initiatives taken to attract women to the courses.*

The Department does not offer such courses.

(ii) **Undergraduate male and female numbers** – *full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any*

initiatives taken to address any imbalance and the impact to date. Comment upon any plans for the future.

Academic year	female	male	total	% female	% female (UK)
2009-10	253	347	600	42%	-
2010-11	271	338	609	44%	40%
2011-12	287	328	615	47%	-
2012-13	297	318	615	48%	-

Table 1: undergraduate population 2009-13

Table 1 shows the total number of UGs in the Department for the last 4 academic years and the proportion of female students each of those years. The percentage of females has increased steadily over this period and is, in 2012-13, at 48% very close to having equal numbers of males and females and is significantly larger than the national percentage (40% - HESA 2010/11). During this period the total number of UGs increased slightly: from 600 to 615.

It is informative to explore the overseas make-up of our UG population as we believe this has consequences for our PG population. Table 2 shows UG intake data for the corresponding 4 years including data for overseas students. As expected the proportion of female students entering UCL mathematics has risen steadily from 44% to 50%. Perhaps less expected is that this increase is primarily owing to a big increase in the number of overseas students admitted (87 to 116) and that most of these students are female (59% in 2012-13). The majority of female students are from overseas and that this majority is increasing such that in 2012-13 about two-thirds of the UG female population are from overseas. The final column of Table 2 shows the number of female home/EU students has fallen since 2010-11 (41 to 33). We believe that this offers an explanation for the relatively small proportion of female students entering PGR study at UCL (see Sec. 3(a)(iv)).

Academic year	Total student intake	% of the intake who are female	Number of overseas students in the intake	% of overseas students who are female	% of female students who are from overseas	% (and number) of home/EU students who are female
2009-10	203	44%	87	55%	54%	35% (41)
2010-11	197	49%	90	56%	56%	43% (46)
2011-12	184	48%	95	58%	63%	37% (33)
2012-13	203	50%	116	59%	67%	38% (33)

Table 2: UG intake data

The Department was early to recognise the lack of women in UK mathematics and has run events specifically to encourage more female students to consider studying mathematics at university: for more than 10 years we have held an annual 'Women in Mathematics' day aimed at female A-level students thinking of studying mathematics at university. We believe that this event inspires and attracts potential female applicants and contributes to our ability attract nearly 50% females at UG level. Around 40 students attend, mainly from London and the south-east, and are given a day of talks and problem-solving sessions. General interest talks related to research are given by female UCL mathematicians. There are also presentations on careers and university admissions. We are also updating our website to show images of UGs (with at least 50% women) in our newly refurbished UG common room.

3.1 Action: Continue running annual 'women in mathematics days' ensuring female staff involvement

(iii) **Postgraduate male and female numbers completing taught courses** – *full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.*

Table 3 shows the PGT student population. This data comprises the MSc Mathematical Modelling and, from 2012-13, the MSc in Financial Mathematics. An obvious feature is the decrease in the percentage in female students compared to UG. This is a national trend with 34% of UK PGT students in mathematics being female. The percentage at UCL is greater than the UK (HESA 2010/11), possibly owing to the fact that, naturally, a proportion of PGT students were UCL UGs, which, recall, has a greater percentage of females than the national average.

Academic year	female	male	total	% female	% female (UK)
2009-10	7	12	19	37%	-
2010-11	4	6	10	40%	34%
2011-12	5	9	14	36%	-
2012-13	13	19	32	41%	-

Table 3: PGT population 2009-13

(iv) **Postgraduate male and female numbers on research degrees** – *full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.*

Table 4 shows our PGR population for the last 4 academic years. While the total number of mathematics PhD students has increased over this period, there has been a substantial fall in the number and proportion of female students. Assuming the national percentage (HESA 2010/11) of 25% is constant over this period, our percentage in 2012-13 is well under the national average.

There are two immediate causes for concern: (i) the national picture is one of a dramatic drop in the proportion of females in going from UG to PGR mathematics study and (ii) at UCL this drop is even more dramatic: 48% UG compared to 13% PGR. In trying to understand the cause of this (at least locally) we carried out a survey of our UG students (see Sec. 4 and Action 4.3). As discussed later, actions 4.2, 4.4, 4.5, 4.7 address this fall.

year	female	male	total	% female	% national
2009-10	10	24	34	29%	-
2010-11	6	21	27	22%	25%
2011-12	6	25	31	19%	-
2012-13	6	35	40	13%	-

Table 4: PGR population 2009-13

(v) **Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees** – *comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect to date. Comment upon any plans for the future.*

Chart 1: % UG female applications, offers and acceptances

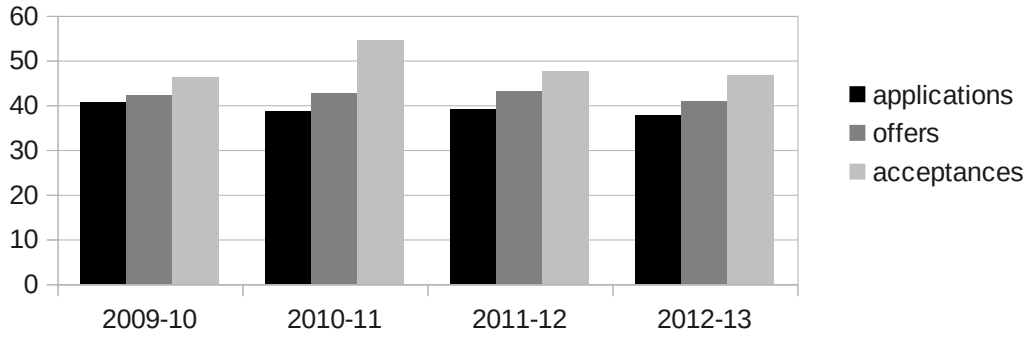
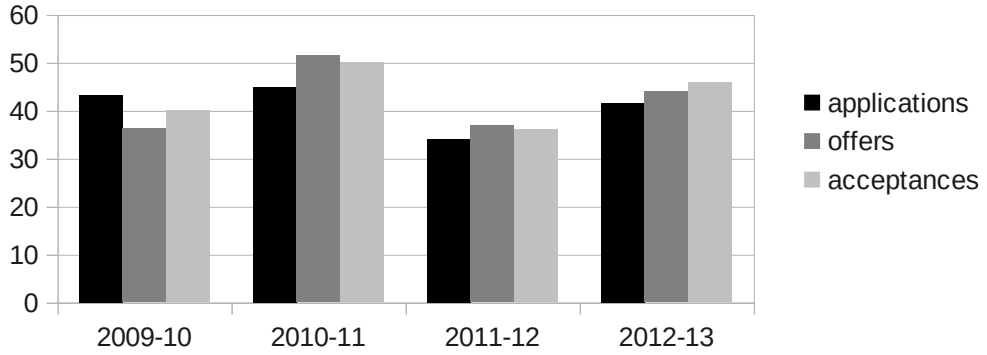


Chart 1 shows, at UG level, a general trend for the proportion of females that receive offers (average of 381 per year) and then accept places (average of 150 per year) increases after application (average 646 per year). Hence while applications from women are around 40%, by the time they accept to study mathematics at UCL their proportion is at least 45% (and well over 50% in 2010-11), suggesting that females holding offers outperform their male counterparts in meeting the level of their offer. It is noteworthy that the offer level has risen steadily in recent years: from 2010-11 to 2012-13 it was A*AA (including Further Math.) and for 2013-14 it was A*A*A (with A*s in both Math. and Further Math.) or A*AA and a '1' in STEP. This places us among the highest entry standard for mathematics degrees in the UK, and the highest among UG programmes at UCL. There is some concern about how this demanding offer will affect the gender balance of future applications.

3.2 Action: Monitor how our increased offer affects the proportion of UG female applications, offers and acceptances.

Chart 2: % PGT female applications, offers and acceptances

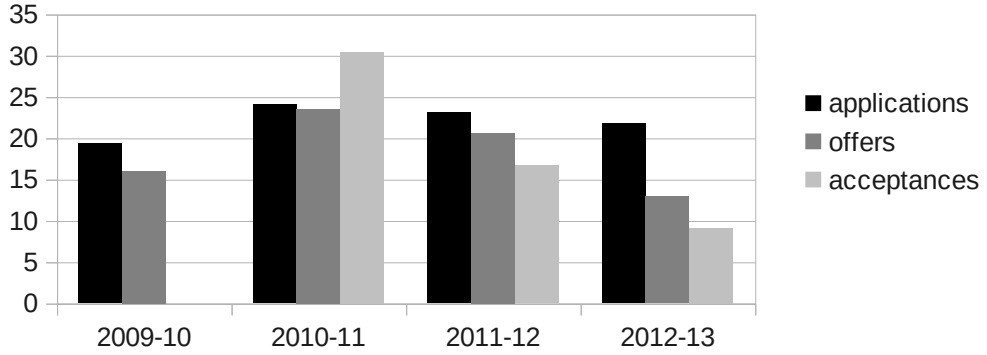


At PGT level (Chart 2) the numbers are smaller (on average 103 females apply, 24 are offered places and 14 accept per year) and it is difficult to draw firm conclusions: in most years the proportion of females accepting is greater than those applying. In 2012-13 we introduced a new MSc in Financial Mathematics which has attracted a good proportion of female applicants and acceptances (nearly 50%).

At PGR level (Chart 3) there is cause for concern (although it should be borne in mind that overall numbers are low: on average 20 women apply per year, 6 are made offers and 3 accept).

The proportion of female applicants is small (less than 25%), representing a considerable drop-off from the available pool of graduating female mathematics students. This is a UK-wide problem and not unique to UCL (see e.g. LMS report *'Advancing women in mathematics: good practice in UK university departments'*). More concerning for the Department is, 2010-11 apart, the fall-off in going from applications to offers to acceptances. This clearly compounds the problem of few female applications and consequently the Department has below the UK average in female PhD students. All applicants are interviewed and are required to give a presentation. This process is run by the 2 (male) graduate tutors who have recently completed (or refreshed) UCL's 'recruitment and selection' training. One of these has completed additional online diversity training in October 2013. To be consistent with our own (and UCL's) policy for appointing panels we propose the following action.

Chart 3: % PGR female applications, offers and acceptances



3.3 Action: At least 25% female staff to be involved in PhD student admission interviews.

Additionally, our website needs to display research activity in a more vibrant way using images and in particular photos of PhD students 'in action', at least 50% of whom are female.

3.4 Action: Update website to a show a more dynamic research environment including images of female mathematicians and PhD students doing research.

(vi) **Degree classification by gender** – *comment on any differences in degree attainment between males and females and describe what actions are being taken to address any imbalance.*

Chart 4: % of each gender awarded degree classification

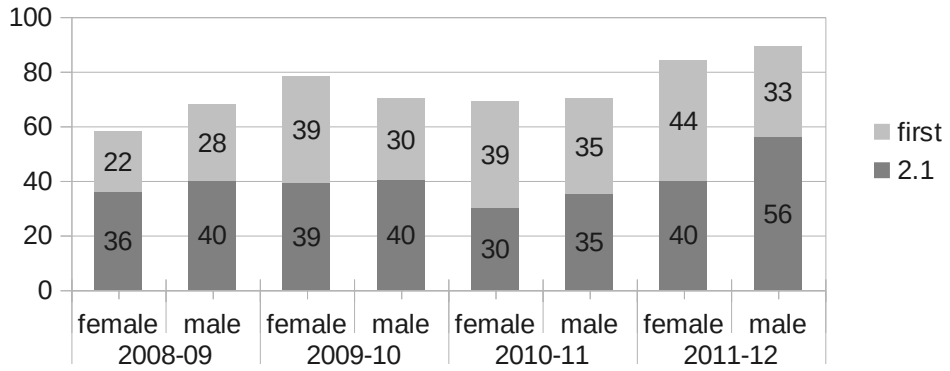


Chart 4 shows that in terms of cumulative 1st and 2.1 degree attainment there is no general trend in female versus male performance. At lower levels there is also no evidence for difference in performance between males and females. However in the last 3 years more females have graduated with 1st degrees than males. This is interesting and makes it even more disappointing that the proportion of females going on to PGR study is small. Our top-performing graduates are recognised by a 'Dean's List' award: in 2012-13 the Department had 6 graduates on the Dean's list of which 3 were female.

Staff data

(vii) **Female:male ratio of academic staff and research staff** – *researcher, lecturer, senior lecturer, reader, professor (or equivalent). comment on any differences in numbers between males and females and say what action is being taken to address any under-representation at particular grades/levels*

Chart 5: Staff data (% and FTE)

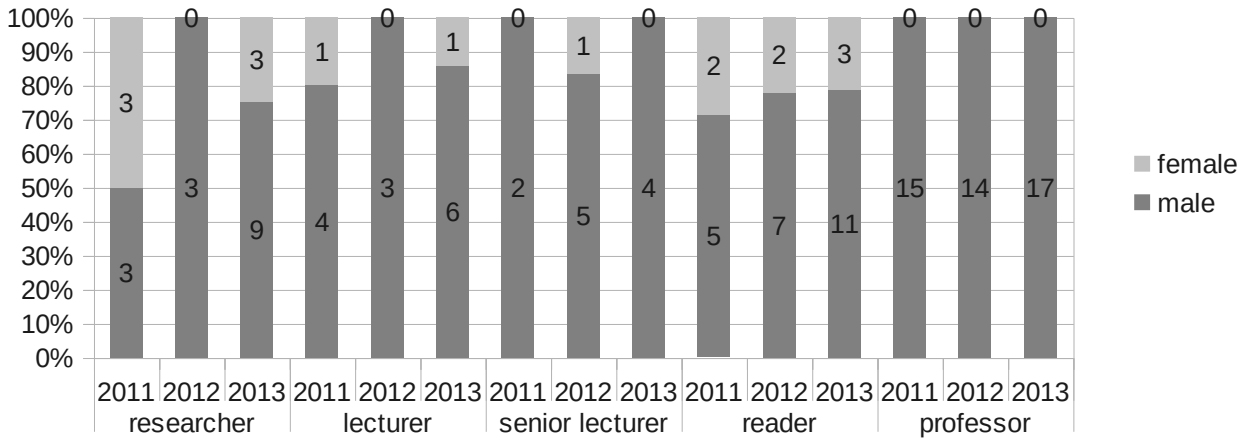
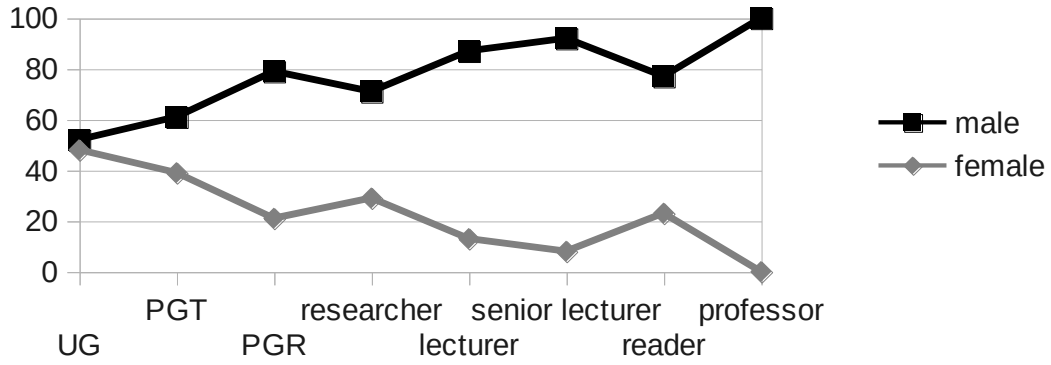


Chart 6: % male/female in academic pipeline 2011-12



As shown in Chart 5 (data applicable for 1 October in each year) the Department faces a challenge, as does the whole UK Mathematics community, in its small proportion of female research and academic staff at all levels. The problem culminates here in not presently having any female Professors. For comparison, there were 6.3% female mathematics (including statistics) professors in the UK in 2010/11 (HESA). Chart 6 gives the academic pipeline in the Department averaged over the last 3 years and reinforces the point that the critical transition for female participation is from UG to PGR. Actions 4.2, 4.4, 4.5 and 4.7 addressing this will be discussed in Sec. 4. On the other hand, Chart 5 implies that female staff are progressing through the ranks from Lecturer to Reader (see case study 1) and we are confident that some, if not all, of our present female staff will eventually be promoted to Professor provided they are given every opportunity to flourish in all areas of academic life. The proportion of female researchers at national level (22% HESA 2010/11) is similar to our department, however the combined proportion of lecturers, senior lecturers and readers is lower at UCL (20%) than across the UK (28% LMS report). Actions devised at increasing the proportion of female applications have been taken (see Sec. 4(b)(i)). Additionally we are keen to foster and promote women's careers and have actions and good practice in place to ensure this (see Sec. 4(b)(ii)).

(viii) **Turnover by grade and gender** – *comment on any differences between men and women in turnover and say what is being done to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left.*

Since the start of the 2010-11 academic year 4 academic staff, all Professors with permanent contracts, have left: 3 for other universities (Warwick, Oxford, Chicago) and one for the financial industry. One of these was female. In the same period 6 PDRAs left (3 female) following the cessation of their funding, or to take up positions in business/industry (3). Two of those whose funding ceased, took-up other research positions outside UCL, and 1 (female) became a Lecturer in UCL's Centre for Advanced Spatial Analysis.

[1969 words]

4. Supporting and advancing women's careers: maximum 5000 words

Key career transition points

a) *Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.*

(i) **Job application and success rates by gender and grade** – *comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.*

Since October 2010 the Department has appointed 8 research staff and 13 academic staff (2 Professors, 3 Readers, 1 Senior Lecturer and 7 Lecturers). Charts 7 and 8 show a decreasing percentage in female applications to shortlisting to appointments (note: 2 female post-docs recruited on October 1 do not show in chart 7, but do so in chart 5). From 2011 we have ensured that all appointing panel members are trained in fair recruitment (which includes information on the Equality Act 2010) and that there has been at least one female on appointing panels; this action predating UCL's 25% female representation rule introduced 2013. The HoD who chairs all academic appointment panels received training in unconscious bias awareness in 2012.

In response to this, and in addition to actions already taken, we will run unconscious bias training for academic staff involved in recruitment and selection within the department.

Action 4.1: Increase the proportion of staff serving on appointing panel in unconscious bias awareness.

Chart 7: Research staff recruitment

October 2010-September 2013

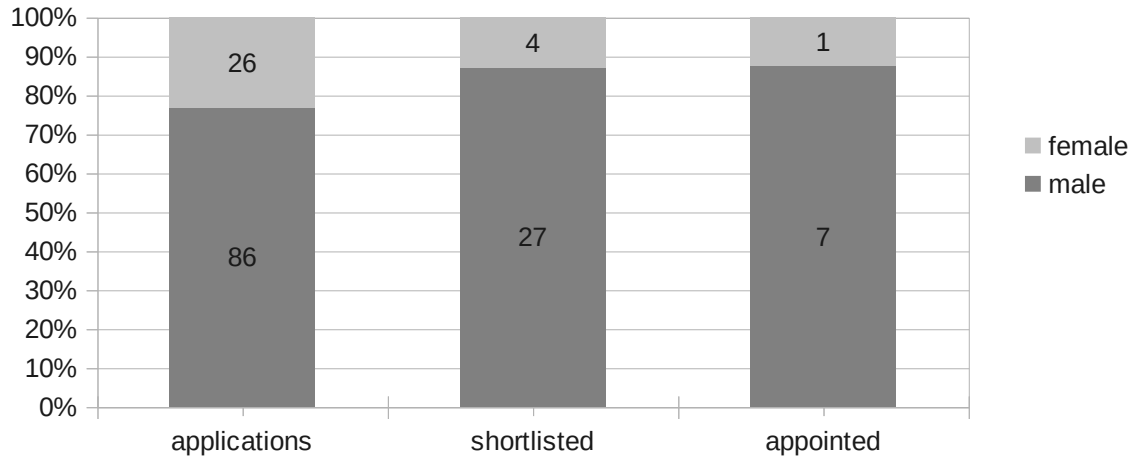
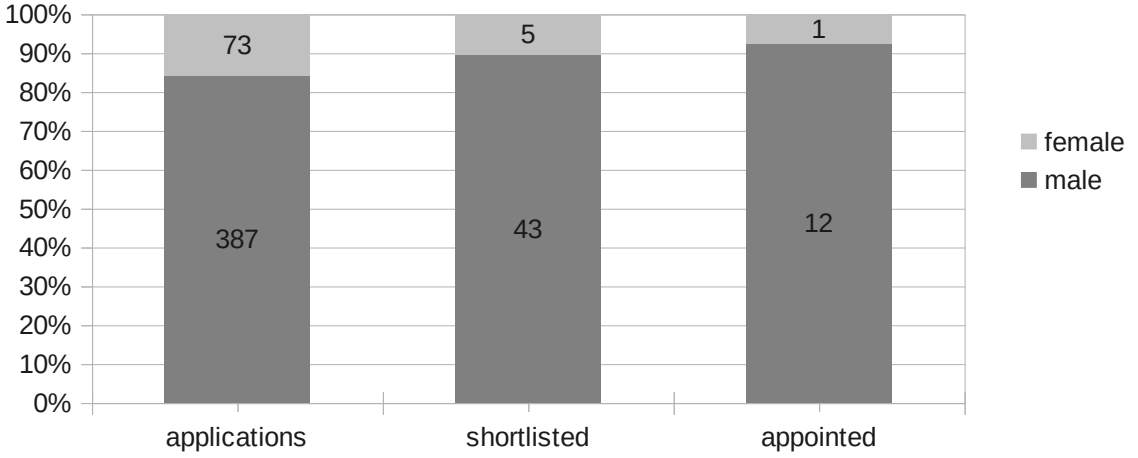


Chart 8: Permanent academic staff recruitment

October 2010-September 2013



(ii) **Applications for promotion and success rates by gender and grade** – *comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific examples of where women have been through the promotion process. Explain how potential candidates are identified.*

Over the last 3 years 7 staff have been successfully promoted. There have been no unsuccessful cases. This is made up of promotions to Professor(1), Reader(4) and Senior Lecturer(2). Of these, 2 have been female; in fact the same female (see case study). The Department promotions committee (which has female representation via the deputy HoD) meets annually to discuss the promotion prospects of *all* staff; the annual process is well-advertised by the College including case studies made available on its website, and additionally by email from the HoD who welcomes staff to discuss their promotion prospects should they be unsure; and at the Term 1 staff meeting. Particular attention is applied to female staff as the promotion committee is aware that studies have shown females are less likely than males to put themselves forward for promotion. Promotion is also discussed at appraisals. The HoD reads all promotion cases and provides advice and guidance to applicants.

b) *For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.*

(i) **Recruitment of staff** – *comment on how the department's recruitment processes ensure that female candidates are attracted to apply, and how the department ensures its short listing, selection processes and criteria comply with the university's equal opportunities policies.*

The Department signed up to the LMS Good Practice Scheme in 2012. The scheme supports UK mathematics departments in embedding equal opportunities for women within their working practices. The logo appears prominently both in job adverts and on our website. Additionally, since autumn 2011 academic vacancies advertised include the wording "*We particularly welcome female applicants and those from an ethnic minority, as they are currently under-represented within UCL at this level."* Each job advert has a link to 'Employee benefits' which details family-friendly benefits, among other things, such as maternity leave, paternity/partners leave, adoption leave, work-life balance policy, workplace nursery and the childcare vouchers scheme.

It is a UCL requirement that all interview panellists have attended the fair recruitment training session Recruitment and Selection HR Policy Briefing, and, since spring 2013, that every panel has a minimum 25% female representation. Since 2011 the HoD has chaired all permanent academic and administrative appointment panels, and panels have had female representation. We are careful not to overburden female staff on appointing (and other) committees, see Action 4.5.

(ii) **Support for staff at key career transition points** – *having identified key areas of attrition of female staff in the department, comment on any interventions, programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training. Identify which have been found to work best at the different career stages.*

Sec. 3 noted the large drop in the proportion of UG female students progressing to PGT and, particularly, PGR study. While PGT and PGR programmes are not just open to our own UG students, our UG students are representative of UK mathematics students and assessing their attitudes toward postgraduate study via a survey is valuable. All UG students were invited to complete a survey designed to gauge attitudes toward PG study in January 2013. 357 completed the survey (58% of the UG population) of which 173 (48%) were female. The main findings were:

- Of those considering PGT about two-thirds were female, and those considering PGR were mainly male (e.g. of the 11 year 3 students thinking about doing a PhD, 10 were male).

- Interest in doing postgraduate study decreases over years 1-3, from about 91% in year 1 to 62% in year 3. This is mainly owing to reduced interest in PGT; the 10% of students interested in doing a PhD remains constant over all years.

- Interest in PGT is driven mainly by overseas females: of all 103 overseas female students who took part in the survey only 6 ruled out the possibility of PGT study. This is in contrast to Home/EU students in which 75 out of 200 were not interested in PGT.

We believe that overseas UGs, who at UCL are mostly female, are intent on obtaining UG and MSc degrees, but not a PhD. This being compatible with their chosen career path (typically finance-related back in their country of origin). Evidence for this comes from the fact that 51% of senior management jobs in China are held by women compared to just 19% in the UK (Guardian *'Women in Leadership*' article, 25 September 2013) and that entry to such roles is, presumably, by UG and MSc degree and not PhD.

On the basis of the above findings there are a number of actions which address the lack of females going on to PhD study (we recognise that PhD places are nationally and globally competitive, but many of our female graduates are capable of PhD study and we should try to address the problem at 'home' as well as globally).

4.2 Action: Actively promote PhD study to all our UGs and, by default, our overseas students.

Promotion of PhD study will be through a 'What is a PhD?' seminar targeted at all students which will include overviews of research in the Department, funding possibilities, presentations by PhD students on their work and a Q & A session with academic staff and PhD students. A similar seminar was run in 2010-11 and had good attendance. We will ensure at least 50% of speakers, presenters and PhD students involved will be female.

4.3 Action: Repeat the UG survey for the next few years in order to follow a particular cohort of students throughout their UG study. This will determine, for example, (i) how the attitude of a particular cohort of students evolves throughout their UG career, (ii) how the attitude of newly admitted year 1 UGs changes from year to year, and (iii) whether the 'what is a PhD' seminars are affecting UG's perceptions of PhD study.

Another form of promotion activity is through role-models and we shall display research achievements of our female staff in a prominent location in the Department with the aim to inspire potential PGR students.

4.4 Action: Highlight research achievements by staff, especially female staff, more visibly around the Department e.g. through a dedicated noticeboard and posters.

Once in PGR study it is vital that a good proportion of female mathematicians make the transition to research careers. Their experiences as PGR students are therefore important. We sought to understand the experiences of our own PGR students and in August 2012 the SAT surveyed 31 of our PhD students (7 female). Responses of particular interest to this submission are given below.

- Question 3. *How do you feel about your research progress?* Males gave a much greater proportion of positive responses to this question e.g. “It’s going strongly”; “I feel it has gone well and I have made important progress in my field”; “very satisfied”. In contrast, females gave mostly negative responses e.g. “Very slow in the first year, a lot to read and learn –

trying my best to cope really"; "My overall impression is that it's not good enough (failing is a possibility I am preparing for)". Significantly, only 1 female gave a response which could be interpreted as overwhelmingly positive.

- Question 7. *What do you think you will do after your PhD?* Males were much clearer on their next career steps e.g. "A postdoc"; "I would like an Academic career"; "Career in Finance as a quant". In contrast several females responded without clarity for their future career i.e. "no idea" (more than once); "not sure"; "apply for jobs"; "no clue".

- Question 8. *Have you considered a career in academia*? All male respondents have considered an academic career and most still entertain the possibility. Most females have also considered such a career, but most are now thinking of careers outside academia.

- Question 9. *What contributed to your decision (in Qu. 8)*? The females who are now considering a likely career outside academia attributed their decision to the following "the nature of the academic environment"; "Lack of faith in my ability, experience during PhD, competitiveness"; "I prefer to work in a more dynamic environment"; "I find it very isolating" and speculated that "could be the PhD environment".

It is arguable that the relatively negative experience of female PGR students stifles their ambition toward an academic career. This is not unique to this Department nor to mathematics: a study of UK Chemistry PhD students (*The Chemistry PhD: the impact on women's retention,* a report for the UK Resource Centre for Women in SET and the Royal Society of Chemistry) concluded that early-career women scientists leave academia in far greater numbers than men for three reasons. During their PhD large numbers of women find (i) the characteristics of academic careers are unappealing, (ii) the impediments they will encounter are disproportionate and (iii) the sacrifices they will have to make are great. At the start of their PhD studies 72% of women chemists intend to pursue academic careers, but this drops to 37% in their final year (in comparison men start at 61% and drop only slightly to 59% in their final year).

While we caution that our survey was based on a relatively small sample and done only in one year, the above conclusions are of concern. Action needs to be taken to (i) increase the proportion of female PhD students and (ii) enhance the positive experience of female PhD students in the Department.

An action immediately implemented following the survey was to introduce two female academic advisers/mentors for female PhD students. These new roles have been advertised to students by email and to new PhD students at their welcome meeting. The role of these advisers is to provide another source of information, guidance and advice for female PhD students. This is in addition to their two (primary and subsidiary) supervisors and graduate tutors. Already one of the advisers has been approached by a female student seeking advice.

4.5 Action: The Department plans to hold an 'open day' for prospective mathematics PhD students annually in autumn similar to the successful recruitment day run by the geometry group in 2012. The day would involve at least 50 percent female speakers and would involve an informal networking event for prospective and current PhD students.

4.6 Action: The Department aims to increase interaction between its staff and PhD students.

For example, student attendance at seminars must improve and post-seminar teas should be made more welcoming to students. We will introduce large TV screens in prominent locations around the Department to advertise daily and upcoming events. Longer term, staff and students should be located in the same building (presently PGR and most staff are in separate but adjoining buildings).

Additionally, we propose to give our best UGs a 'taste' of research by promoting more widely and effectively various summer research scholarship schemes e.g. LMS Undergraduate Research Bursaries, UCL's International Students Dean's Summer Student Scholarships. An example of a successful project is given in case study 1. This will be achieved by creating a new academic staff administration role who will promote these opportunities among staff and students.

Action 4.7: Appoint a 'summer project czar' whose role is to effectively promote the various summer UG research project schemes available.

The Department is delighted to introduce its own self-funded Fellowship programme from 2014 (the 'Clifford Fellowship'). This will be a rolling 3-year position for outstanding early career researchers at the key PhD-Research-Lecturer transition point, similar to schemes run by other UK mathematics departments (e.g. Warwick, Imperial). The lack of opportunities at this key career point was specifically commented on by the International Review of Mathematics 2010.

Action 4.8: Advertise 'Clifford Fellowship', with the now standard encouragement and welcoming of applications from females.

Career development

a) *For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.*

   (i) **Promotion and career development** – *comment on the appraisal and career development process, and promotion criteria and whether these take into consideration responsibilities for teaching, research, administration, pastoral work and outreach work; is quality of work emphasised over quantity of work?*

All permanent staff are appraised every 2 years and, from summer 2013, all professorial staff are appraised annually. We believe that appraisal is vital for career development and we propose that all staff be appraised annually.

Action 4.9: From January 2014 all academic staff will be appraised annually.

We will train additional senior staff in appraisal to share the additional appraisal load implied by Action 4.9. HR gives 2-weekly electronic notifications of upcoming appraisals needed. Contributions and objective setting to all areas of academic activity (research, teaching, enabling and knowledge transfer) are discussed and set. Appraisals are viewed as development opportunities and are a key mechanism for identifying training and development needs, as well as preparation for promotion. The ethos (made plain at appraisals, staff meetings, circulation of research strategies, etc.) of the Department, especially regarding research, is that quality, and not quantity, is key. Indeed, in its REF2014 Environment statement an overarching theme is the Department's commitment to depth, rigour and application. The key words here are 'depth' and 'rigour' with their clear implication of quality over quantity. Quality of achievement is also emphasised in other academic areas of teaching, enabling and knowledge transfer.

If permitted by their funder, most PDRAs teach and examine one course per year thus benefiting their career development.

Case study 1 details how priority allocation of PhD students to an early-career staff member aided her career development.

The Department introduced an internal peer review process to help with grant applications in 2009. Through this scheme, experienced staff are able to provide advice and guidance in the preparation of research proposals by less experienced staff. Since then, the grant income of the Department has more than doubled, with notable successes by early career researchers e.g. ERC starting grants, EPSRC first and standard grants. Noteable successes by women applicants include EPSRC First Grant (2012) and a large Wellcome Trust Grant Investigator Award.

(ii) **Induction and training** – *describe the support provided to new staff at all levels, as well as details of any gender equality training. To what extent are good employment practices in the institution, such as opportunities for networking, the flexible working policy, and professional and personal development opportunities promoted to staff from the outset?*

UCL has a probationary scheme for Lecturers enabling them to develop their talents as members of the UCL community committed to academic excellence. Usually the probation period is 3 years which may be reduced if the Lecturer has already acquired significant teaching and research experience. The HoD is responsible for monitoring their professional development during probation by annual review, and for putting in place an appropriate support network e.g. mentors. We recognize that probationers are under pressure to achieve excellence in all aspects of their academic life, but we ensure they are eased into their various roles: new staff are given reduced teaching loads (typically 50%) in their first year and only light administrative duties during their probation period. Probationary staff are required to attend the Professional Certificate in Teaching and Learning in Higher and Professional Education course. Their lighter teaching load enables them to complete the course.

New staff at the beginning of their teaching careers are encouraged and financially supported to attend the annual Higher Education Academy (HEA) Induction Course for New Lecturers in Mathematics, Statistics and Operational Research held in September: an early-career Lecturer, appointed in 2012, attended and found it very beneficial.

UCL's Organisational Development (OD) service facilitates the development of personal and professional capability of all staff by providing workshops, courses, briefings, desktop learning and conferences covering, for example, leadership and management, continuous personal and professional development, transferable skills and career development for research staff. A database of such courses attended by staff is maintained and is made available at appraisals.

Since all staff are expected to serve on appointing panels, the Recruitment and Selection Policy briefing given by OD and the Equality and Diversity team is especially encouraged to be taken by newly starting staff, and it is mandatory for those serving on panels. The training covers relevant aspects of the Equality Act 2010. Staff were reminded of the need to 'refresh' their training in this respect in September 2013: since then 8 staff have enrolled on the course. In addition, all new staff have to complete online training in Equality and Diversity as part of their probation and induction.

New staff are provided with an information pack with details about department structure (e.g. committees and their terms of reference and membership, department computing facilities, key dates, promotion procedures, details of professional development courses), flexible working policies and information on UCL’s policies for parents and carers. Additionally, we plan to place this information on a staff intranet.

4.10 Action: Create a staff intranet for the provision of information for new and existing staff.

Recently launched is UCL Women, a network for female academic staff in engineering and the sciences at post-doctoral level and above. Various events have been organized including talks (e.g. *My Mum's a scientist: thinking about young children and science*), a summer picnic, lunchtime meetings, and a talk on smart networking using Twitter. The existence of this network as well as other networking opportunities for both males and females should be made explicit to new and existing staff. Again, a staff intranet would be useful in doing this.

4.11 Action: Create awareness of networking opportunities especially for new staff.

The two departments of Mathematics and Statistical Science together with the Centre for Mathematics and Physics in the Life Sciences and Experimental Biology (CoMPLEX) held a joint lunch-time networking event for their female academic staff and PhD students in October 2013. Normally the staff and students in the two departments and CoMPLEX have little opportunity for networking given their large geographical separation. It was a great success with over 30 women attending with a common reaction being *'wow! Are there that many women?!'*

4.12 Action: Hold three joint Mathematics-Statistical-CoMPLEX lunches and networking events for female staff and PhD students per year.

(iii) **Support for female students** – *describe the support (formal and informal) provided for female students to enable them to make the transition to a sustainable academic career, particularly from postgraduate to researcher, such as mentoring, seminars and pastoral support and the right to request a female personal tutor. Comment on whether these activities are run by female staff and how this work is formally recognised by the department.*

As mentioned earlier, special female mentors have been nominated and publicised for female PhD students. This role is recognized by the fact that the 2 staff involved are assigned relatively lighter administration tasks. This support is in addition to the student's first and second supervisors and the 2 graduate tutors in pure and applied mathematics. The HoD is also available and is welcoming of PhD students should they require pastoral support (examples of such support from the HoD have occurred recently from both male and female PhD students).

Organisation and culture

a) *Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.*

(i) **Male and female representation on committees** – *provide a breakdown by committee and explain any differences between male and female representation. Explain how potential members are identified.*

The Deputy HoD is not a formal position recognised by the College, but nonetheless the role is a significant one within the Department with the Deputy HoD sitting on strategic decision-making committees e.g. Research Committee, REF strategy, covering for the HoD at Faculty meetings when needed. The Deputy role is presently held by a woman (see case study). We feel this has been beneficial to the department, not only so that there is a prominent female role model within the department, but that different perspectives are brought to key decision making processes within the Department. We hope we will be able to maintain a gender balance in future when management changes.

Membership on various committees (see Table 5) is not restricted to senior staff. This permits staff from all grades to influence strategy, influence how the Department is run and develop management skills. Roles and membership are changed periodically e.g. HoD (5 years), Exam board chairs (3 years). The HoD makes appointments to Department committees in consultation with other colleagues.

Department	**males**	**females**	**% female**
Teaching Committee	8	2	20%
Athena SWAN SAT	4	5	56%
Promotions Committee	3	1	25%
Research Committee	4	2	33%
Admissions (UG, PG)	4	0	0%
Exam Board Chairs	4	0	0%
Seminar organizers	5	1	17%
REF2014 coordination	1	1	50%
Computer Committee	5	2	29%
Staff-student Committees (UG,PG)	4	2	33%
MAPS Faculty	**males**	**females**	**% female**
Library Committee	1	0	0%
Faculty Teaching Committee	1	0	0%
Faculty HoDs Committee	1	0	0%

Table 5: Department Committee membership October 2013

(ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts** – *comment on any differences between male and female staff representation on fixed-term contracts and say what is being done to address them.*

All staff appointed as PDRAs are on open-ended contracts with a funding end date. Presently, we have our largest number of post-docs ever: 9 male, 3 female. The female percentage (25%) is above the UK average in mathematics (about 20%). All academic staff are permanent.

While PDRAs have funding end dates attached to their contract, they are on UCL permanent contracts – this means that they are added to the UCL redeployment register before the end of their contract. In addition, the department supports PDRAs through regular review which include specific discussion on career guidance. Support and feedback on the writing of grant applications is also provided (see Sec. Career Development (a)(i))

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Representation on decision-making committees** – *comment on evidence of gender equality in the mechanism for selecting representatives. What evidence is there that women are encouraged to sit on a range of influential committees inside and outside the department? How is the issue of 'committee overload' addressed where there are small numbers of female staff?*

Service on committees is viewed as important to the smooth-running of the Department and a contribution to the core academic activity of 'enabling'. Assignment to committees is done with fairness in mind as well as providing opportunities for career development. The Department has deliberately increased female representation on its Research Committee enabling female staff to influence future research strategy, as well as aid their own personal development. The Deputy-HoD sits on the Promotions Committee. Committee overload is potentially a serious problem for female staff in the Department given their small number. This is of particular concern given the recent College requirement of at least 25% female representation on appointing committees. While this requirement is viewed positively, it will require careful monitoring and management of committee membership of female staff. We shall limit our female staff to acting at most 3 interview panels per year. This issue is being helped by training our post-doctoral researchers in recruitment, which will also provide a development opportunity for PDRAs, seeing the process for appointment to more senior academic positions and the standard required.

4.13 Action: Monitor closely committee membership and associated time effort of the Department's female staff.

(ii) **Workload model** – *describe the systems in place to ensure that workload allocations, including pastoral and administrative responsibilities (including the responsibility for work on women and science) are taken into account at appraisal and in promotion criteria. Comment on the rotation of responsibilities e.g. responsibilities with a heavy workload and those that are seen as good for an individual's career.*

The Department has no formal workload model: we believe that there is no 'perfect' quantitative model and that they can, in fact, be divisive and often lead to more 'problems' than they solve (e.g. unhelpful discussion about the weighting of various tasks). On the other hand, the HoD, with whom responsibility for allocation of teaching and administrative lies, is fully aware of the duties of all staff and ensures that they are evenly and fairly distributed, which is possible in a relatively small Department. Teaching and administrative tasks are openly circulated among all staff every year. Data on student (UG, PGT and PGR) project supervision is also made available. Staff are welcome and encouraged to discuss their workload with the HoD. This has, in fact, happened and changes implemented as a result.

(iii) **Timing of departmental meetings and social gatherings** – *provide evidence of consideration for those with family responsibilities, for example what the department considers to be core hours and whether there is a more flexible system in place.*

The Department considers 'core hours' to be 10am to 4pm and has, for more than a decade, ensured that all its meetings are scheduled to start and finish in this period. Special functions which take place outside of core hours are publicised well in advance e.g. Christmas Party.

(iv) **Culture** – *demonstrate how the department is female-friendly and inclusive. 'Culture' refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff and students.*

The Department prides itself on a friendly and inclusive atmosphere. Some evidence for this comes from the 2013 National Student Survey, where the Department scored in the top quartile for overall student satisfaction (96%) and was UCL's 4th placed Department and the top-performing STEMM department. Particular efforts are made to welcome UG students e.g. sponsorship of a social event for new students in Freshers' week to which staff are encouraged to attend, funding for the De Morgan Society (the mathematics UG society), an annual Christmas Quiz including staff with the HoD acting as the quiz-master, and funding for the excellent UG seminar series in which UG students present general interest mathematics-related talks to each other (often attracting UGs from beyond UCL). Weekly small-group tutorials for year 1 students are also a chance for staff and students to get to know each other. There are staff-student committees at UG and PG level and students formally sit on the Department Teaching Committee. The Department is particularly proud of its staff who have won several (highly competitive) teaching awards at College and Faculty level in recent years including 2 student-choice UCL-wide awards (one being for 'outstanding student support').

Welcome events are held for newly starting PG students in the first week of term. Additionally, PG students attend the annual Department party held in October and the Department Christmas party in December.

It was pleasing that the 2011 UCL all staff survey revealed a remarkable 100% positive response from the Department on (a) '*I am interested in the work that I do'* and (b) '*My work gives me a sense of personal accomplishment'.* UCL will conduct another all-staff survey in November 2013.

The De Morgan Dinner is an annual event held in June for staff, alumni, final year UG students and PG students, which attracts about 80 participants. There is a guest speaker and a particular effort was made in 2013 to have a female speaker. We were delighted to have Dr Hannah Fry, a former UG and PhD graduate who now holds a lectureship in UCL's Centre for Advanced Spatial Analysis, give a talk at the dinner. Hannah is a leading communicator of mathematics and an impact case study will be submitted to REF2014 based on her public engagement.

In 2011-12 the Department introduced a colloquium: talks aimed a gener. al mathematical audience for staff and PG students (which also attracted interested UG students). After a year's absence in 2012-13, they will be re-started in 2013-14 with an increased budget allowing for high-profile speakers (1 per term) to be invited from outside the UK. In view of the wide cross-section of audience (UG to Professor) and, in particular, inspiring students and early-career researchers, we feel that it is particularly important that these colloquia feature female speakers.

Action 4.14: Ensure at least 50% of the colloquia speakers are female.

(v) **Outreach activities** – *comment on the level of participation by female and male staff in outreach activities with schools and colleges and other centres. Describe*

who the programmes are aimed at, and how this activity is formally recognised as part of the workload model and in appraisal and promotion processes.

In addition to the 'Women in Mathematics' day (see Sec. 3) the Department organized the 'Meet the Mathematicians' (MTM) event in March 2012. This was an annual event running for 5 years (2008-12) funded by a EPSRC grant held by the Universities of Manchester and Southampton, aimed at year 12-13 students interested in mathematics. MTM was held in conjunction with the annual British Applied Mathematics Colloquium (BAMC) and the local organizers were permitted to choose the MTM speakers. At the UCL-led event we ensured that at least 50% of the speakers were female, inviting leading female mathematicians from the New Jersey Inst. Tech and U. Manchester to give talks. The event was extremely popular with about 150 students attending with many more wanting to attend but could not owing to space limitations.

Knowledge transfer is recognized by UCL as a core activity (along with research, teaching and enabling). Performance and achievement in this activity is expected and monitored at appraisal and is formally part of the promotion process. Public engagement and outreach is viewed and promoted in the Department as a way of achieving this.

UCL was one of the "Beacons of Public Engagement" associated with the BBC's Bang Goes the Theory project, and, in 2009, Helen Wilson was one of the scientists helping answer questions from the public.

In another initiative, UCL (October 2013) established a 'Women in Science' outreach initiative and 2 of our female staff appear on the database of speakers, and there is a link on our website to the '*Inspiring Women in Science Speakers*' page.

Flexibility and managing career breaks

a) *Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.*

(i) **Maternity return rate** – *comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.*

In the last three years the Department has had 1 staff go on maternity leave (case study 2) and 1 PhD student. Both returned to full-time work/study after their leave.

(ii) **Paternity, adoption and parental leave uptake** – *comment on the uptake of paternity leave by grade and parental and adoption leave by gender and grade. Has this improved or deteriorated and what plans are there to improve further.*

In the last 3 years all 7 staff entitled to 2 weeks of paternity leave have taken it. From April 2013, the UCL entitlement to paid paternity leave is 4 weeks, and fully supports the new provision of additional paternity leave. We have advertised this among our staff and will encourage uptake in the future. Two male staff members have taken adoption leave (one of them on 2 occasions), both of whom returned to the department full time.

(iii) **Numbers of applications and success rates for flexible working by gender and grade** – *comment on any disparities. Where the number of women in the department is small applicants may wish to comment on specific examples.*

No formal requests for flexible working have been made in the last 3 years. This is usually organised informally within the department and flexible working is considered 'normal'.

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Flexible working** – *comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.*

The Department does its utmost to accommodate requests for scheduling of teaching commitments to enable staff to meet parental and caring responsibilities. Equally, meetings and seminars are scheduled during core hours. For example, a staff member has lectures specifically timetabled so as to allow him to collect his child from daycare in the afternoon.

Staff frequently work from home, this being entirely possible for research mathematicians who, for example, do not need access to specialist laboratory equipment.

It has become common for seminar speakers (about 50%) from outside the Department to be entertained post-seminar by taking them to dinner. Such networking activity is viewed as important as it allows members of staff to further discuss research with the visitor. However, this scheduling means that staff with caring responsibilities miss out on this valuable interaction. Opportunities to discuss research and socialise with visitors should be available to all staff and we aim to increase the proportion of hospitality during core hours.

Action 4.15: At least 66% of visitors and seminar speakers should be entertained during core hours (e.g. Lunch) so as to maximize opportunities for staff interaction.

(ii) **Cover for maternity and adoption leave and support on return** – *explain what the department does, beyond the university maternity policy package, to support female staff before they go on maternity leave, arrangements for covering work during absence, and to help them achieve a suitable work-life balance on their return.*

HR have produced a comprehensive set of online FAQs in relation to maternity, paternity, adoption and parental leave, which we circulated to all staff. UCL maternity leave policy, in the words of Dr Helen Wilson '*is pretty generous so it's hard for the Department to go much beyond*'. Helen found it useful that she had her own office allowing her to take a nap in late pregnancy. Since not all academic staff have their own office this leads to:

Action 4.16: We will ensure that an office is available as a rest room for pregnant female staff. This can also be used for breastfeeding and expressing.

A full-time Teaching Fellow was appointed for an academic year to cover Helen's duties (partly funded by a central-fund, partly by the Department). Upon return from her first child the university had a policy of a term's sabbatical that could be applied for but wasn't guaranteed. Helen's application was unsuccessful, so the Department assigned her a term with practically no teaching anyway (one contact hour a week). After her 2nd child, the university policy had become a guaranteed sabbatical term. Helen has been able to work flexible hours permitting her to get to nursery pick-up. On the occasions that Helen has been unable to make meetings, she observes '*Informally, I've felt that no-one in the department is critical when I can't make meetings; that's probably the most important thing for me'*. We're committed to similar practices and attitudes toward future pregnancies among staff.

[4999 words]

5. Any other comments: maximum 500 words

> *Please comment here on any other elements which are relevant to the application, e.g. other STEMM-specific initiatives of special interest that have not been covered in the previous sections. Include any other relevant data (e.g. results from staff surveys), provide a commentary on it and indicate how it is planned to address any gender disparities identified.*

Olga Chervova won the 2012 MAPS Faculty Postgraduate Research prize for her work on the spectral theory of first order systems of partial differential equations. This is a very competitive prize given it involves a large number of PhD students from various departments including Physics and Chemistry. Following our suggestion, the Dean explicitly mentioned Olga's research in his speech at the annual Graduation Ceremony in Sep 2013. We believe this was an excellent way to promote the outstanding achievements of a female PhD student, and we will use future opportunities to do similar.

The Department is leading a new EPSRC Centre for Doctoral Training *'Geometry and Number Theory at the Interface'* joint with King's and Imperial College starting 2014-15. Promotion of gender equalities is a top priority for the CDT. For example, one of the three co-directors will be female; the Chair of the advisory board will be Prof Frances Kirwan FRS, a high profile female mathematician from Oxford; and the board will have a seat for a nominee of the LMS Women in Mathematics Committee with the present Chair of the Committee Prof Gwyneth Stallard agreeing to take this seat for the initial 2 years; recruitment strategy will address under-representation of women at PhD level. An innovative scheme aimed at addressing the latter point is presently being discussed with Newnham College Cambridge, and would involve bursaries for female students studying Part 3 at Cambridge (arguably the UK's best preparation for PhD study in the UK) and then suitably qualified candidates being offered a place on the CDT.

The SAT Chair gave a presentation at the Athena Forum workshop held at the Royal Society in September 2013 about the LMS's good practice scheme and the helpful workshops they hold aimed at supporting UK mathematics departments who are preparing for Athena SWAN awards. This was a useful opportunity to raise gender equality issues among funding bodies.

[315 words]

6. Action plan

Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.

The Action Plan should be a table or a spreadsheet comprising actions to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The plan should cover current initiatives and your aspirations ***for the next three years****.*

7. Case study: impacting on individuals: maximum 1000 words

> *Describe how the department's SWAN activities have benefitted* ***two*** *individuals working in the department. One of these case studies should be a member of the self assessment team, the other someone else in the department. More information on case studies is available in the guidance.*

Appendix: Action Plan

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
2.1 Recruit new PGR student to the Department's Athena SWAN SAT	Completed October 2013	Ensure in the years to come that the SAT always has PGR representation	HoD	October 2013	Two new PGR students (both female) appointed to the SAT
2.2 Reports from the Department's Athena SWAN SAT to become a standing agenda item at all-staff meetings	This was an item at the Oct 2013 staff meeting	To be included in all future staff meetings	HoD	From start of academic year 2013-14	Reports received and discussed at all staff meetings, with opportunities for non-SAT staff to be informed and contribute.
2.3 Repeat PGR survey (see Sec. 4) every two years		Next survey in summer 2014	PGR representatives on SAT	Every 2 years	Increased positive responses from female PGR students, to the point that they are similar to males
3.1 Continue running annual 'Women in Mathematics days' ensuring female staff involvement	Ongoing: event will be held as usual in June 2014	To be held annually in June	UG Admissions Tutor	June of every year	Well-attended events by aspiring female university mathematics students some of whom apply successfully to UCL and other UK mathematics depts

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
3.2 Monitor how our increased offer (A*A*A) affects the proportion of female applications, offers and acceptances at UG level	2013-14 data now available. To be discussed at next SAT meeting	To be discussed annually	UG Admissions Tutor reporting to SAT	Term 1 SAT meeting of every year.	Data presented annually to SAT in term 1. If these changes have negative impact on gender balance then they will be revised
3.3. At least 25% female staff to be involved in PhD student admission interviews	PGR tutors advised of this action	To be reviewed and proportion increased should more women staff be available	PGR tutors	Term 1 2013-14	SAT to monitor effects on PGR recruitment. The ultimate aim is to increase female admissions in PGR
3.4 Update website to a show a more dynamic research environment including images of female mathematicians and PhD students doing research		Call for such images to be made in term 2 2014	HoD, Dept. Administrator, Admissions Tutor	Images to be reviewed and possibly refreshed annually	Increased UG, PGT and PGR applications upon viewing positive role models and welcoming atmosphere
4.1 Increase the proportion of staff serving on appointing panel in unconscious bias awareness	HR has been approached to organize such training in Feb 2014 for a group of 10	Further training sessions for additional members of staff	HoD	First group to be trained in term 2 2013-14. Termly training sessions thereafter	From 2014-15 recruitment panels have at least 40% members trained in unconscious bias. This to increase by 10% per annum until 70% is reached

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
4.2 Actively promote PhD study to all our UGs and, by default, our overseas students	Workshop for PhD students held in 2010-11 with good attendance	'What is a PhD?' workshop planned for term 2 2013-14. To feature talks by female staff and Q and A by current PGR students (including females)	PGR Admissions Tutors	Term 2 2013-14, annually thereafter	Good attendance. Increased applications for PGR study from our own UG female students
4.3 Repeat the UG survey for the next few years in order to follow a particular cohort of students throughout their UG study	First done term 2 2013 (as discussed)	UG survey to be held annually in Term 2	SAT - The PGR representatives on the SAT will lead on this process.	Annual in term 2.	Return rate greater than 50%. Thorough discussion, analysis and action by SAT
4.4 Highlight research achievements by staff, especially female staff, more visibly around the Department	Prominent noticeboard now located on 6th floor near HoD and Dept. Administrator offices-a 'high traffic' area	Update from time to time with latest research highlights by female staff	Female staff/HoD	Reviewed and updated on a termly basis.	People stopping to read the noticeboard; interested 'conversational buzz' centred on content. Inspiring UGs into PGR study
4.5 The Department plans to hold an annual ‘open day’ for prospective mathematics PhD students in Autumn		Annual department-based open day for PhD study	PGR Admissions Tutors	Term 1 2014-15	Good attendance (at least 40 students). Increased applications for PGR study from non-UCL female students

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
4.6 Increase interaction between staff and PhD students	Specialist IT providers approached and quote received	Install large TV display screens advertising seminar, Department events etc. Long term: co-locate staff and PhD students in same building	HoD, Dept. Administrator and seminar organizers Dean/Provost/Estates	2013-14 2016	Improved attendance by PGR at seminars and post-seminar networking ()at least 75% of PGR students to attend a seminar every week) All mathematics personnel co-located
4.7 Appoint a 'summer project czar' whose role is to effectively promote the various summer UG research project schemes available	New 'czar' appointed in October 2014	'Czar' to advertise and promote summer studentships schemes among UG students and staff	Summer project czar	Project work undertaken during summer terms starting 2014	Talented students (in particular female students) undertake successful projects. They enjoy the experience and continue to PGR study (monitored by their destinations upon graduation)

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
4.8 Advertise Clifford Fellowship with the now standard encouragement welcoming applications from females	Advert now live. Closing date 1 December 2013	Shortlisting Dec 2013; interview Jan 2014	HoD	Advertise post every 3 years	Attracting outstanding early career mathematicians to UCL
4.9 From January 2014 all academic staff will be appraised annually	Appraisers notified of this commitment	All staff to be informed	HoD and appraisers	annual	Career development opportunities to be identified, resulting in successful promotions.
4.10 Create a staff intranet for the provision of information for new and existing staff	Approach has been made (Sept 2013) to website developer		Dept. Administrator	By end of 2013-14 academic year	Implementation of intranet including upload of minutes of various Department committees, general information useful for staff
4.11 Create awareness of networking opportunities especially for new staff		Via email and new intranet	Intranet to be updated by admin. staff. Email notification for some events by HoD	From start of 2013-14	Staff to be fully aware of Dept. and UCL-wide networking opportunities – to be evidenced through increased attendance to events

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
4.12 Hold three joint Mathematics-Statistical-CoMPLEX lunches and networking events for female staff and PhD students per year	Inaugural event held October 2013	Further events to be funded by the 2 Departments and CoMPLEX	Prof Sofia Olhede (Statistics) and Dr Helen Wilson	3 such events are planned per year	Enhanced interaction between female staff leading to research, teaching and career development. Success measured through consistent high attendance from female staff.
4.13 Monitor closely committee membership and associated time effort of the Department's female staff	This is now actively monitored		HoD	From start of 2013-14	Females involved in making key decisions in the Department without being overburdened
4.14 Ensure at least 50% of the colloquia speakers are female	First speaker in 2013-14 was male	Speaker for term 2 2014 must be female	Colloquium organizer	From start of 2013-14	SAT to monitor. Role models to inspire next generation of female mathematicians. Increased attendance from female PhD and research staff

Action	Action already taken	Further action planned	Responsibility	Timescale	Success measure
4.15 At least 66% of visitors and seminar speakers should be entertained during core hours	HoD had made clear this commitment to all seminar organizers	To be implemented from 2013-14 academic year	Various seminar organizers.	From start of 2013-14 academic year	SAT to monitor. Increased attendance and networking opportunities for those with caring responsibilities. 66% of networking opportunities during core hours in 2013-14, and to continue each year
4.16 We will ensure that an office available as a rest room for pregnant female staff. This can also be used for breastfeeding and expressing		When required	HoD	As and when required	Rest room made available and used by pregnant staff