

Athena SWAN Silver Department award renewal application



Name of institution: University of Edinburgh

Date of application: April 2016

Department: School of Informatics

Contact for application: Professor Mirella Lapata

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Departmental website address: www.ed.ac.uk/informatics

Date of previous award: 2013

Date of university Bronze and/or Silver SWAN award: 2006/2009 (Bronze), 2015 (Silver)

Level of award applied for: Silver

This means something has been changed since the last time Mirella/Martin saw this draft.

1. Letter of endorsement from the Head of Department – maximum 500 words
Johanna/Martin

An accompanying letter of endorsement from the Head of Department should explain how the SWAN action plan and activities in the department have and will in future 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 renewal application and to endorse and commend any women and SET 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 (both within the department and as part of the team) and their experiences of work-life balance, parental leave, flexible working etc;**

The self-assessment team (SAT) consists of the Informatics Equality and Diversity Committee, plus additional members co-opted for key activities, such as the staff/student data brainstorming workshop which helped to inform our latest Action Plan.

The Committee was established in 2013 from the previous SAT, and is Chaired by the Informatics Equality and Diversity Coordinator, formally allocated to the role as an academic administrative duty as a direct outcome of our last Athena Swan Action Plan (Actions 1.c and d from our previous submission).

The core team includes academic representatives from all institutes, at all career stages, undergraduate and postgraduate students and members of support staff who deal with staff/student recruitment and retention. The Head of School is an ex officio member. The size of the team is unchanged. Five served on our last submission (indicated with an asterisk* below).

The number of men has increased from four to six, (from 25% to 37.5% male, 75% to 62.5% female). The rich cultural diversity reflects the international nature of our staff and student body. The work-life balance of the team is varied. Most are in dual career relationships with some kind of caring responsibility.

Table 1: Informatics Self Assessment Team (SAT)

| Name | Role | Experience |
|--|--|---|
| Professor Mirella Lapata, Chair of Informatics Equality and Diversity Committee (2013 - present). | Informatics Equality and Diversity Coordinator. Personal Chair in Natural Language Processing | PhD alumna. Two periods of maternity leave since re-joining Informatics in 2005, after lecturing at Sheffield. Children aged 9 and 5. |
| Lindsey Brown | Computing Support Officer | Studied here as a mature student. Adult children. |

| | | |
|--|--|---|
| Dr Christophe Dubach* | Lecturer | Over 10 years' experience of the School as MSc/PhD student, postdoc and lecturer, with two visiting research posts elsewhere |
| Dr Vashti Galpin* | Senior Research Fellow. SAT data analyst | Research interests include women in computing. Experience of part-time (p/t) and fixed contract work, non-standard career path. |
| Professor Johanna Moore (ex officio) | Head of School. Chair in Artificial Intelligence | Academic since 1976. Head of School since August 2014. Mother of two adult children |
| Nantas Nardelli UG Student Representative | Final year undergraduate and Research Assistant | Former class rep and undergraduate school rep. |
| Helen New, Athena Swan Coordinator (until maternity leave in Dec 2015) | Informatics Athena SWAN Co-ordinator and Institute Portfolio Manager | Former University-level Athena Swan coordinator (maternity cover) with prior experience of early-career researcher challenges. Two small children. Part-time (p/t). |
| Anda Nicolson | PA to Head of School | Admin rep. Working full time while studying for an undergraduate degree. |
| Dr Ajitha Rajan | Lecturer. Chancellor's Fellow. Personal Tutor (undergraduates) | Joined Informatics in 2013. Took maternity leave as a postdoc in both Oxford and Grenoble. Two young children. |
| Dr Subramanian (Ram) Ramamoorthy* | Reader in Robotics | Joined the School as a lecturer in 2007. In a dual career marriage. Father of a 10-year old daughter. |
| Dr Michael Rovatsos | Senior Lecturer, Director of Centre for Intelligent Systems and their Applications | Passionate about Equality and Diversity issues. Bilingual upbringing. Joined School in 2004 from Greece via Germany. |
| Dr Guido Sanguinetti* | Reader | Shares childcare of three primary- |

| | | |
|--|---|--|
| | | school-aged children with wife who works freelance in the Arts. |
| Alina Selega PhD Student Representative | 2nd year PhD student | Personal experience of and interest in under-representation of women in technical fields. Active in tackling the imbalance. |
| Heather Walker Athena Swan Coordinator (maternity cover, Dec 2016-present) | Communications Officer | Maternity cover for two p/t roles. Background in equality and diversity. Author, LGBT Pathways to Parenthood (Equality Network 2013). P/t carer for elderly mother. |
| Dr Mirjam Wester* | Research Fellow | Has taken maternity leave three times since joining in 2003. Part-time since 2005. Children aged 10, 7 and 4. |
| Martin Wright Member of Committee and Athena Swan submission group | Director of Professional Services. | Over 30 years management experience, 15 in HE. Former Senior Lecturer (Leeds Met 1998-2001). Father of two secondary school children |
| Julie Young Member of Committee and Athena Swan submission group | Head of Finance and Research Services and Head of Informatics HR. | 20 years' service. Started as p/t Grade 4 Accounts Administrator on 1 year fixed term contract and gradually progressed to current post. Mother of three. Equality and diversity integral to daily role. |

- b) an account of the self assessment process, with reference to year-on-year activities since the original Department award application, details of the self assessment team meetings, including any consultation with staff or individuals inside or outside of the university, and how these have fed into the submission;

The SAT team met 13 times as the School's equality and Diversity Committee since our Silver Award was granted, twice in 2013 and 2014, five times in 2015 and monthly in 2016 in the run up to this Athena Swan submission. In addition the Equality and Diversity Co-ordinator met with the former Head of Professional Services every month, 2013-14, until she left.

Table 2: Dates of self assessment team meetings

| Year | Dates |
|------|--|
| 2016 | 20 January, 10 February, 10 March, 30? March |
| 2015 | 4 February, 17 June, 25 August, 8 October, 14 December |
| 2014 | 12 March, 19 June |
| 2013 | 13 November, 26 November |

Minutes are available to staff and students via the School's intranet.

In the academic year 2015/16, between full team meetings, a sub group - the Athena Swan submission group - took forward key actions as the submission date approached. The sub group consisted of the Chair, Athena Swan Coordinator, Director of Professional Services, Head of Finance and Research Services (who manages the HR admin team) and PA to the Head of School.

The SAT team reports to the School's Strategy Committee, which meets monthly and is Chaired by Head of School, Professor Johanna Moore. The SAT Chair and Athena Swan Coordinator are members of the College's Athena SWAN network (Action 1.g).

The Equality and Diversity Committee has a budget of £10k per year to promote and support events, training and internships.

Table 3: Activities supported through the Equality and Diversity Committee budget

| Activities supported by the Equality and Diversity Committee | |
|---|---|
| Hoppers | Student-run women in technology group. Holds regular 'lunch and learn' and other skill building events. 258 members. Celebrated 10th anniversary Dec 2015. Named after 1950s programming pioneer "Amazing Grace" Hopper |
| Careerwise summer internships | Funds two female 3rd year undergraduate student summer internships. Annual since 2013 |
| Informatics Jamboree | Social community building event for all students, staff, family members. Combines fun academic activities with competitions and ceilidh. Held April 2014, March 2015, due May 2016 |
| Women in Computing events | Organised with hoppers / attended (2014, 2015, 2016) |
| Travel funds | Supported members of School to attend networking/career development events eg. Grace Hopper conference, BCSWomen Lovelace Colloquium, womENCourage and London Hoppers Colloquium (2014-2016). |
| BCSWomen Ada Lovelace Colloquium | Hosted / provided speakers (Oct 2015) |
| Equal Bite | Hosted workshop for crowd-sourced 'recipe' book focusing on gender equality in higher education (Jan 2016) |
| INSPIRE summer school | Taking part in summer school for S4 girls (July 2016). |

Across the School, Informatics women have continued to encourage and promote girls and women in science and technology. At national and international level, for example, Professor Jane Hillston continues to be a member of the Women in Research Committee of the Computing Academy and has recently become Chair of the Women in Informatics Research and Education (WIRE) working group of Informatics Europe (2016 - 2017), having previously been a member of the working group (2014 - 2015). Through WIRE she is also an ex-officio member of ACM-W Europe, the European branch of ACM's Women in Computing. Locally, many staff are active in outreach, not least Dr Areti Manataki, who runs a wide range of hands-on workshops to encourage girls, boys and interested adults to learn basic programming (detailed in 6vii).

INSERT PICS OF JANE HILLSTON AT HOPPERS AND ARETI MANATAKI WORKSHOP

Equality and Diversity / Athena Swan continues to be a regular item at the School General Meetings, attended by all staff (Action 1.h). Equality-related activities, events and career development opportunities are routinely circulated to staff and students via email, a new quarterly staff newsletter (initiated September 2015) and social media (primarily the School's lively Facebook and Twitter accounts).

In March 2016, we launched 'Work with us', a new section of our School website, which describes the School's inclusive family-friendly ethos, commitment to the 10 principles of the Athena Swan Charter, equality and diversity activities including Athena Swan, information about induction, training and employment policies, sources of funding for women in science and technology and other useful resources (Action 1.b).

[INSERT SCREEN SHOTS WHEN LIVE]

Data gathering for the submission was a phased process. Some data was collected and analysed regularly as part of existing management processes (eg. appraisals, staff recruitment and promotion, student gender analysis, training evaluation feedback).

Other data was collected prior to or during the self assessment process (eg. the staff/student equality culture surveys which took place in October 2015 provided comparison data with the survey run before the last submission in 2012, with results outlined in section 3 below).

Data collection has improved at School and University level since the last submission but some questions in the 2015 culture survey need to be reviewed (new action eg. when asked if they agreed or disagreed with the statement, "Staff who work part-time/flexibly are offered the same career development opportunities as those who work full time" the majority ticked 'Don't know' because they could only answer on the basis of personal experience. Another respondent said, "This survey is clearly aimed at academic/research staff. As I am not in this group, I have found it difficult to relate to most of the questions."

- c) **Plans for the future of the self assessment team, such as how often the team will continue to meet, any reporting mechanisms and in particular how the self assessment team intends to monitor implementation of the action plan.**

Provisional dates for meetings of the team in 2016/17 have been identified as:

Table 3: Provisional dates of future self assessment team meetings

| Year | Dates |
|------|------------------------------------|
| 2016 | 15 June, 21 September, 14 December |

| | |
|------|--|
| 2017 | 15 March, 21 June, 30 September, 13 December |
|------|--|

The team will continue to report to the School Strategy Committee, which meets monthly and includes all the Directors of Institutes and key function areas eg. Teaching, Research, Professional Services.

However, scrutiny by the Strategy Committee will increase as our new female Head of School seeks to make the changes necessary for us to work towards an Athena Swan Gold Award. The School recognises that it could have communicated some actions better. This is addressed in the current Action Plan. **Moving forward, the Athena Swan submission group will grow to become the Athena Swan Implementation Group, which will include staff with mainstream responsibility in areas which require action under the latest Action Plan. The Chair of the Implementation Group will attend all meetings of the Strategy Group, report progress and answer to the Head of School, as Chair, if key milestones are not met.**

In addition, additional funding has been secured to supplement our resource in HR, which will allow responsibility for specific Athena-Swan-related tasks to be undertaken by HR staff.

We are also launching an informal Women in Informatics group, which will recognise Champions of Women in Informatics. Our aim is to increase recognition and support for those individuals across the School who work to increase the numbers and improve the experience of women in Informatics - and to bring them together, at dedicated receptions hosted by the Head of School and as an email group, to improve communication and implementation of our Athena Swan goals.

Membership of the SAT team will be reviewed every 12 months to make sure it retains the right balance in terms of gender, experience and work life balance.

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 changes since the original award.

The School of Informatics (computer science and related fields) is the largest in the UK and one of the largest in Europe. With approximately 250 academic and research staff (15.3% female) and around 1288 students (22.5% female), it is the second largest School in the University's College of Science and Engineering and the most research intensive. While Universities UK reports a decline in students studying computer science, with 36,795 fewer in 2013/14 than 2004/05, our intake has grown.

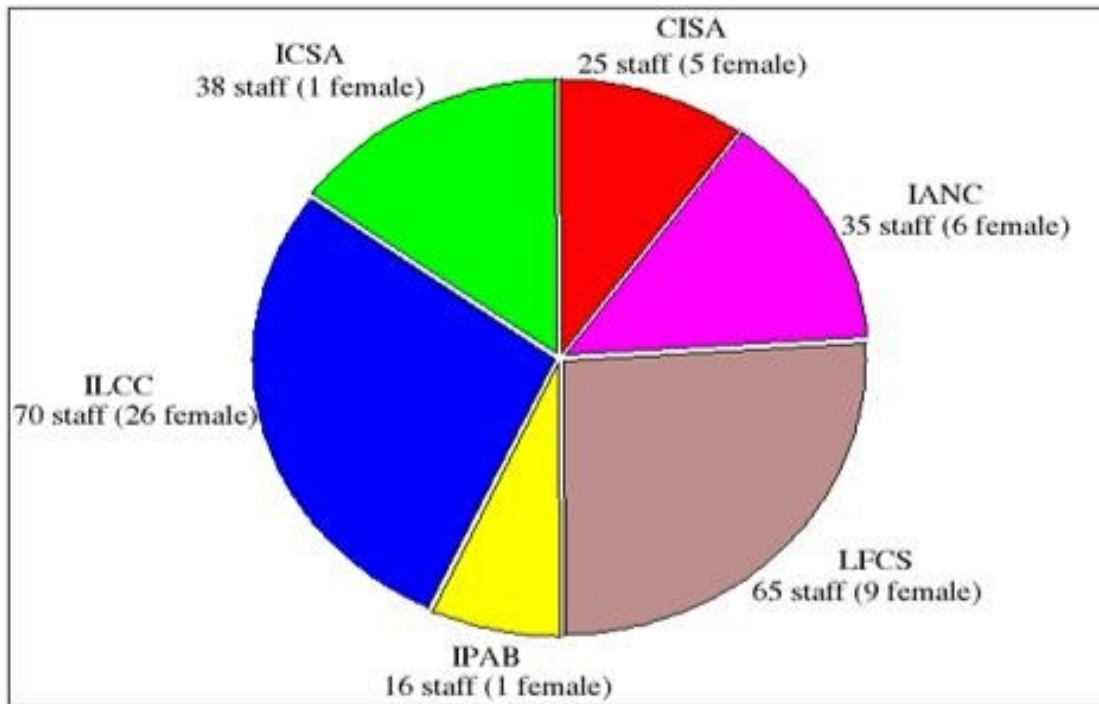
A number of our senior post holders are women. The Head of School, Deputy Director of Graduate School, Director of Informatics Computing, Director of the Institute of Perception, Action and Behaviour, Deputy Director of the Laboratory for Foundations of Computer Science, Deputy Director of the Doctoral Training Centre in Neuroinformatics, and Head of Finance and Research Services (a support role) - are female. Our Recruitment Officer and MSc Admissions Officer, both academic posts, provide positive female role models in key outward-facing positions.

Research within the School takes place in institutes (Table 4 below), each led by an academic Director and containing closely related research groups. Every institute is represented within our SAT.

Table 4: Institutes within Informatics

| | |
|---|------|
| Institute of Adaptive and Neural Computation | IANC |
| Institute of Language, Cognition and Computation | ILCC |
| Institute of Computing Systems Architecture | ICSA |
| Laboratory for Foundations of Computer Science | LFCS |
| Centre for Intelligent Systems and their Applications | CISA |
| Institute of Perception, Action and Behaviour | IPAB |

Figure X: Academic and research staff across institutes



Although staff have a primary institute they are often affiliated with more than one institute. Nevertheless, institute identity is strong and makes a significant contribution to School culture, via social events, seminar series and informal PhD communities. At the same time, there are also School-wide gatherings, from inaugural lectures to the School-wide Jamboree, a social event for all staff and their families, which combines talks with competitions and a ceilidh.

The School operates a devolved budget allocation mechanism meaning institutes hold individual budgets they can use to support a diverse range of activities.

We teach 5 single honours and 11 joint undergraduate degrees covering topics in Computer Science, Artificial Intelligence, Software Engineering, Cognitive Science and Informatics. There are currently approximately 600 undergraduate students. We also offer MSc degrees in Artificial Intelligence, Computer Science and Informatics and a very wide range of specialisms within each of those. There are currently around 250 taught postgraduate students and 300 postgraduate research students.

Teaching is organised around the degree programmes and therefore, across research institutes, allowing cross-institute interaction. The quality of our teaching is recognised by

student nominations for annual teaching awards; we average 20+ individual staff nominated for teaching excellence per year. In the most recent awards, four of our 22 staff nominated were women.

The Informatics Teaching Organisation (ITO) provides technical and administrative assistance for staff and support for students. The ITO is also responsible for curriculum and quality assurance across 113 courses (53 undergraduate, 60 postgraduate) offered to undergraduate and taught postgraduate students. The ITO is overseen by the Director of Teaching, a senior member of academic staff who takes on this administrative duty, typically for three years.

PhD students are affiliated with the research institute of their primary supervisor. We currently have 284 PhD students (29.2% female). Supervisors and PhD students are supported by the Informatics Graduate School, which provides administrative support for the recruitment, funding and training of postgraduate research students. The Informatics Graduate School is led by its Director, a senior member of academic staff, typically for three years, supported by a Deputy Director, currently a woman. Both roles are academic administrative duties.

In terms of challenges facing our School with regards to gender equality, we believe the core issues are common to the majority of Informatics (computer science) departments in Higher Education, as summarised in the diagram below.

Diagram: Pieces in the pipeline for increasing the numbers of women in Informatics/computer science

| | |
|-------------------|--|
| ← Pipeline | More female applicants / students |
| | Undergraduate |
| | Postgraduate taught |
| | Postgraduate research |
| | More female staff |
| | Applications |
| | Conversion to appointments |
| | Better female career progression |
| | Address issue of fixed term contracts |
| | More women in senior roles |

- b) **Provide data and a short analysis for at least the last five years (where possible with clearly labelled graphical illustrations) on the following, commenting on changes and progress made against the original action plan and application, and initiatives intended for the action plan going forward.**

Student data

- (i) **Access and foundation male and female numbers – full and part time.**

The recent report by Universities UK, 'Patterns and trends in UK Higher Education 2015,' indicates that the number of students using access and foundation courses is falling. This is certainly true of female applicants. The School participates in the Lothian Equal Access Programme (LEAPS) for local schools that do not have a strong tradition of students going on to university. LEAPS is based close by in Buccleuch Place and we have hosted a number of their events for school pupils, most recently their S5 Conference (23 March, with similar events earlier this year on 14 January and 4 February).

Table X: Undergraduate applications / acceptances through the Lothian Equal Access Programme (LEAPS) programme

| Year | Applications | | Offers made | | Actual entrants | |
|---------|--------------|------|-------------|------|-----------------|-------------------|
| | Female | Male | Female | Male | Female | Male |
| 2011/12 | 7 | 27 | 5 | 26 | 2 | 7 |
| 2012/13 | 0 | 36 | 0 | 29 | 0 | 11 |
| 2013/14 | 5 | 43 | 4 | 39 | 3 | 12 |
| 2014/15 | 3 | 44 | 3 | 37 | 1 | 7 |
| 2015/16 | 4 | 42 | 3 | 34 | 0 | 9 (1 deferred) |

One of the four young women who applied for 2015/16 entry under LEAPS was rejected and the others were offered conditional places but did not meet the conditions. In the same cohort, eight male students were rejected and nine males were offered conditional places but did not meet the conditions.

We accepted one male student through the Scottish Wider Access Programme in 2012/13 and two in 2015/16. Our mature students tend to have worked in the IT industry before deciding to continue their education, and they apply directly through UCAS.

We have a lively outreach programme (outlined in section 6 vii). Each year, the School takes part in the Sutton Trust Summer School, aimed at widening participation among school students aged around 16. Last year nine pupils attended our workshops, which are run by our postgraduate students and organised by our Recruitment Officer, Professor Helen Pain. The dates this year are 4-7 July.

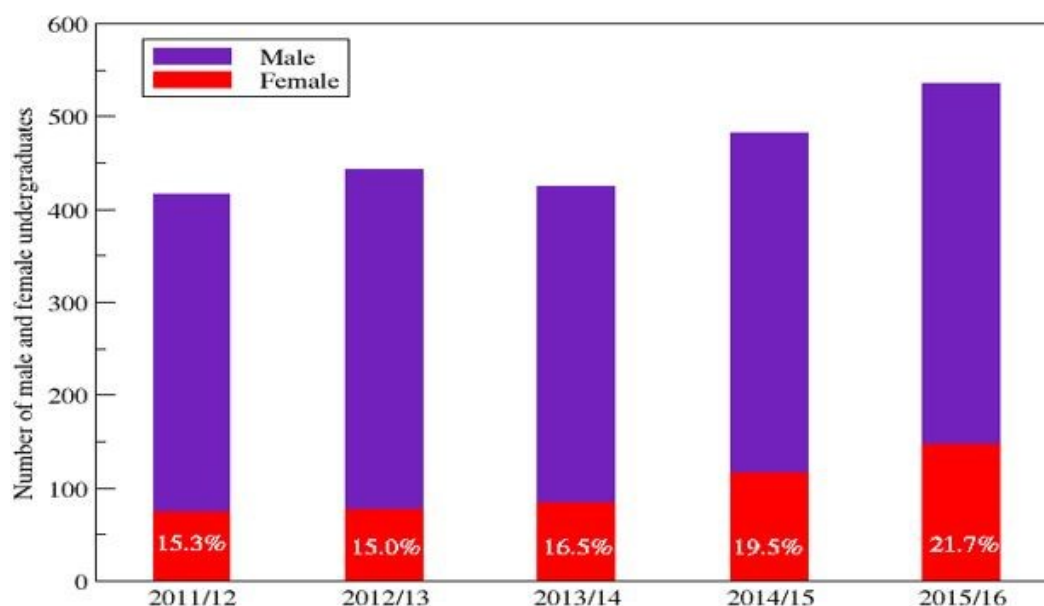
(ii) **Undergraduate male and female numbers – full and part-time.**

All our undergraduates study full-time (no part-time programme is offered). The proportion of female undergraduates has increased steadily from 15.3% in 2011 to 21.73% in 2015. This outstrips the national trend: UCAS acceptances by subject group and sex, published 21 January 2015, indicate that across UK universities, only 13% of new computer science students in 2014 were female, although more women than men are accepted into higher education.

Table 5. Undergraduate taught cohort (full-time students)

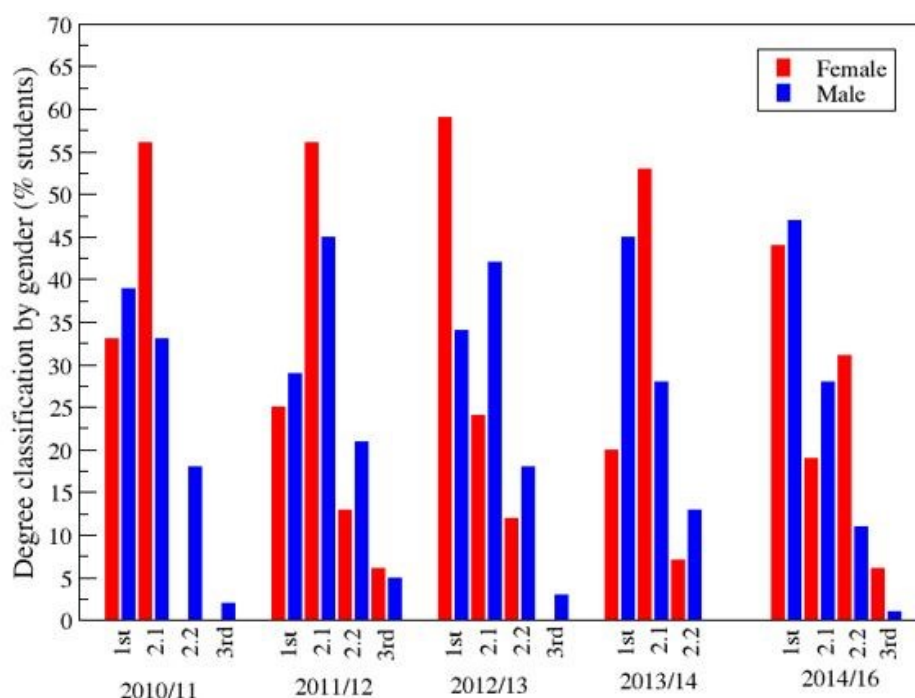
| Year | Full-time undergraduates | | | |
|---------|--------------------------|-------|--------|-------|
| | Male | | Female | |
| 2011/12 | 416 | 84.7% | 75 | 15.3% |
| 2012/13 | 443 | 85.0% | 78 | 15.0% |
| 2013/14 | 424 | 83.5% | 84 | 16.5% |
| 2014/15 | 482 | 80.5% | 117 | 19.5% |
| 2015/16 | 535 | 78.3% | 148 | 21.7% |

Figure X: Proportion of male /female undergraduates over the past 5 years.



Our female undergraduates perform well, showing similar average levels of attainment to male students, which indicates that female students who enter the School are equally successful in completing their courses and that our current assessment processes show no evidence of gender bias.

Figure XX: Degree classification achieved by undergraduates, by gender

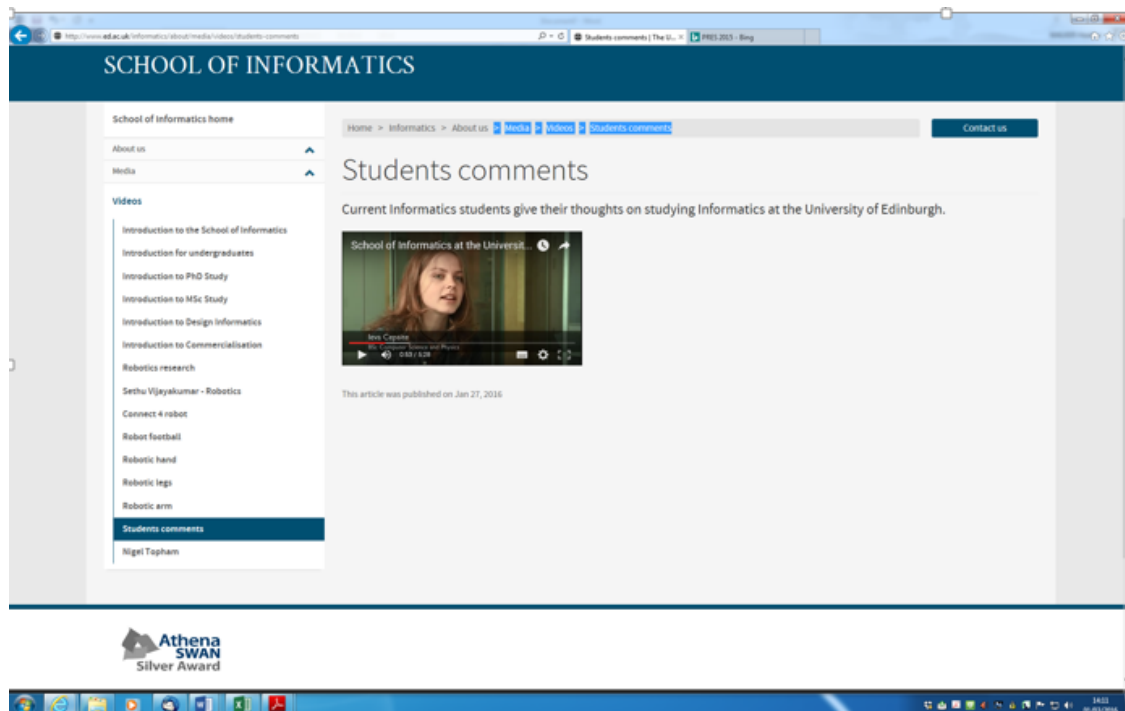


We continue to work to increase our numbers of female applicants by regularly reviewing and enhancing our recruitment web pages and marketing materials to highlight our support of female students. More multimedia resources are being added to our website, and we have plans for more videos featuring more undergraduate female student voices like those of Ieva Cepaite and Marija Pinute in our current Student Comment video.

Our recent student culture survey, completed by 63 undergraduates (24 female, 39 male) showed some mixed results, which we address in our latest action plan (Action X.X). While one respondent said, "I have never been discriminated against, quite the opposite, everyone seems to appreciate me more" and another enthused, "I would recommend this School as a great place to study for everyone, including Trans people," others felt less comfortable. One said, "Although female students in the School of Informatics are treated the same as male students, males overwhelmingly outnumber females." Another noted, "The general atmosphere is very macho/laddish." We will work with Student Services, student societies including CompSoc and Hoppers, and student year group representatives to identify how best to address any pockets of 'laddish' behaviour, to improve the student experience for

everyone. We have also noted a request that future surveys “use more gender inclusive language... to include non-binary people, not just male and female.”

Screenshot: Current student comment video



Female academics continue to give talks and staff information desks at open days, while female student ambassadors share their experiences of student life and lead campus tours. Wherever possible, female applicants are matched with female members of staff for one-to-one meetings at post-application visit days, and a representative from Hoppers gives a talk.

"For me, the Post Application Visit Day was what made me choose Edinburgh. As someone with little programming experience, I was worried I would not be able to keep up with the more experienced students. Being able to speak to other girls studying Artificial Intelligence and Computer Science built my confidence in my decision to choose the subject." Katie Worton, 1st Year undergraduate

We also reach out to young people in the wider community. For example we have provided a local centre for the Young Rewired State annual week-long Festival of Code since 2012 and in 2013, inspired by the three teams we entered for the final competition, we established Prewired, a weekly drop in programming club for young

people in Edinburgh under the age of 19. Apart from offering regular evening sessions, and participation in the Festival of Code, Prewired has been part of the STEM Ambassador network (since March 2014) and organises or takes part in a wide range of events eg. week-long hack sessions during the Edinburgh International Science Festival (April 2014, 2015); hosted a stall at the Edinburgh Mini Maker Faire (April 2014, 2015); won the team presentation prize in the First Lego League Regional Finals in Edinburgh (November 2014).

Our students also support SCI-FUN, an outreach initiative within the College of Science and Engineering which delivers interactive science to local secondary schools, which this year includes a new Scottish Science and Technology Roadshow.

Within the School, Edinburgh Hoppers continues to encourage undergraduate women in Informatics by organising events and talks from women in the industry. Regular Lunch and Learn events carry this telling “Disclaimer: lifelong friendships may be formed.” Recent activities in 2016 include: the launch of Apiary Coding: Collaborative Learning for women and non-binary folk, Hoppers and Amazon Tech Interview Workshop, Hoppers Resume Prep with Microsoft and a talk by MathWorks. The group is currently setting up a travel scheme to enable more female students to travel to conferences related, but not restricted, to academia and technology.

This year, the School will take part in the Inspire summer school for Year 11/S4 girls. Inspire courses are for girls who love science and technology and who want to learn new skills, set against a science/technology project, which will help them to progress in their academic life.

We also fund Careerwise summer internships for two female 3rd year undergraduate students, to give them a taste of research within the School.

“I have left this internship with more strings to my bow - programming in Java, Unix and a broad network of great, intelligent people.” Dominique Osborne (Careerwise intern 2015)

Since 2014 the Equality and Diversity Committee has awarded prizes for female undergraduate and graduate students. To honour female Informaticians we have created the Claire Jones Prize for the best performing female MSc student. Claire was an Informatics Alumnus who gained her PhD in 1990 and became a Research Fellow before working as a software consultant at Adelard until her death from cancer in 2005.

- (iii) **Postgraduate male and female numbers on and completing taught courses – full and part-time.**

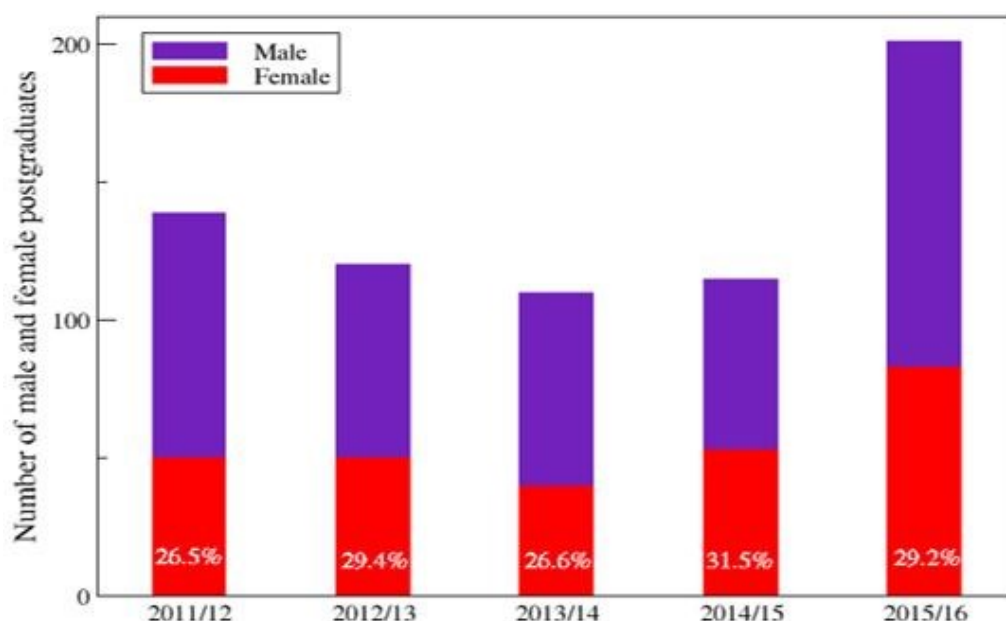
Table 6: Postgraduate taught (PGT) cohort (full-time and part-time)

| | Full-time PGT | | | | Part-time PGT | | | |
|----------|---------------|-------|--------|-------|---------------|-------|--------|-------|
| Year | Male | | Female | | Male | | Female | |
| 2011/12 | 135 | 73.8% | 48 | 26.2% | 4 | 66.7% | 2 | 33.3% |
| 2012/213 | 118 | 71.5% | 47 | 28.5% | 2 | 40.0% | 3 | 60/0% |
| 2013/14 | 104 | 73.2% | 38 | 26.8% | 6 | 75.0% | 2 | 25.0% |
| 2014/15 | 115 | 68.5% | 53 | 31.5% | 0 | NA | 0 | NA |
| 2015/16 | 192 | 70.8% | 80 | 29.4% | 9 | 75.0% | 3 | 25.0% |

Informatics requires a pipeline of excellent graduates so the recruitment of excellent postgraduates onto our postgraduate taught (PGT) courses has been a long-standing strategy of the School. In addition to our institutes, potential PhD students can now apply for funded places in our three EPSRC Centres for Doctoral Training (CDTs) Data Science, Pervasive Parallelism, and Robotics and Autonomous Systems

The total number of taught full-time postgraduate students has continued to increase over the past five years, with a small but steady increase in the percentage of female students from 26.2% (48 women) in 2011/12 to 29.4% (80) in 2015/2016. Although the number of part-time students in this category remains low, this reflects national trends.

Figure 2: Proportion of male and female postgraduate taught students (all degrees)



To encourage uptake of offered places we use tailored communication with our PGT students beginning about nine months before they arrive in Edinburgh. Individualised content provides information on the School, support structures such as the Personal Tutor allocated to every MSc student, who is responsible for their academic and pastoral care, programme structure and specialist areas, and details on induction processes.

(iv) **Postgraduate male and female numbers on research degrees and completion times – full and part-time.**

The number of women studying full time for research degrees has also increased slightly, from 46 full time in 2011/12 (17.3%) to 58 in 2015/16 (18.8%).

Table 7: Postgraduate research (PGR) cohort (full-time and part-time students)

| Year | Full-time PGR | | | | Part-time PGR | | | |
|---------|---------------|-------|--------|-------|---------------|-------|--------|-------|
| | Male | | Female | | Male | | Female | |
| 2011/12 | 220 | 82.7% | 46 | 17.3% | 9 | 77.8% | 2 | 22.2% |
| 2012/13 | 222 | 83.2% | 45 | 16.8% | 7 | 100% | 0 | NA |
| 2013/14 | 237 | 82.5% | 49 | 17.5% | 5 | 83.4% | 1 | 16.6% |

| | | | | | | | | |
|---------|-----|-------|----|-------|----|--------|---|-------|
| 2014/15 | 255 | 78.6% | 60 | 21.4% | 8 | 88.9% | 1 | 11.1% |
| 2015/16 | 251 | 81.2% | 58 | 18.8% | 11 | 91.67% | 1 | 8.33% |

The tables below indicate that PhD students take on average 3-4 years to submit their theses and that completion rates have decreased from 51 months in 2007/8 to 36 months in 2012/14. Attainment levels are similar for women and men.

Table XX: Postgraduate research – male completion rates

| | 2007/ 8 | 2008/ 9 | 2009/ 10 | 2010/ 11 | 2011/ 12 | 2012/ 13 | 2013/ 14 | 2014/ 15 | 2015/ 16 |
|-----------------------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Male students | 28 | 27 | 34 | 27 | 27 | 31 | 28 | 33 | 28 |
| Withdrawn | 1 | 4 | 4 | 3 | 0 | 1 | 0 | 1 | 0 |
| Still to submit | | | | | 4 | 27 | 28 | 32 | 28 |
| Submitted 2009/10 | 1 | | | | | | | | |
| Submitted 2010/11 | 10 | 1 | | | | | | | |
| Submitted 2011/12 | 14 | 5 | | | | | | | |
| Submitted 2012/13 | 2 | 17 | 14 | | | | | | |
| Submitted 2013/14 | | | 14 | 4 | 1 | | | | |
| Submitted 2014/15 | | | 1 | 17 | 4 | 1 | | | |
| Submitted 2015/16 | | | 1 | 3 | 18 | 2 | | | |
| Total awards | 27 | 23 | 27 | 16 | 7 | 2 | 0 | 0 | 0 |
| Months to submit (avg) | 46 | 46 | 46 | 49 | 46 | 36 | | | |
| Months to complete (avg) | 51 | 52 | 52 | 53 | 43 | 36 | | | |

Key

Yellow highlight = submitted within three years

Green highlight = submitted within four years

Table XX: Postgraduate research – female completion rates

| | 2007/8 | 2008/9 | 2009/ 10 | 2010/ 11 | 2011/ 12 | 2012/ 13 | 2013/ 14 | 2014/ 15 | 2015/ 16 |
|--------------------------|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Female Students | 6 | 3 | 11 | 10 | 8 | 10 | 11 | 13 | 13 |
| Withdrawn | | | 3 | 1 | 2 | | 3 | 0 | 0 |
| Still to submit | | | | | 3 | 9 | 8 | 13 | 13 |
| Submitted 2010/11 | 1 | | | | | | | | |
| Submitted 2011/12 | 2 | 1 | | 1 | | | | | |
| Submitted 2012/13 | 1 | 2 | 5 | | | | | | |
| Submitted 2013/14 | 1 | | 2 | 1 | | | | | |
| Submitted 2014/15 | 1 | | 1 | 5 | 2 | 1 | | | |
| Submitted 2015/16 | | | | 1 | 2 | | | | |
| Total awards | 6 | 3 | 8 | 8 | 4 | 1 | 0 | 0 | 0 |
| Months to submit (avg) | 63 | 46 | 48 | 51 | 46 | 27 | | | |
| Months to complete (avg) | 55 | 45 | 46 | 49 | 43 | | | | |

The postgraduate community is strong and active, attending the regular seminars organised by their institutes and running their own School-wide postgraduate SNACK Club, which focuses on “Synergising Non-Aligned Centres of Knowledge” ie. offering talks, often careers-based, followed by pizza and beer!

As a School, we actively review our PhD recruitment practices. We articulate our commitment to gender equality explicitly in recruitment literature and webpages, including a paragraph on Athena Swan in our School Postgraduate Prospectus and a new case study featuring PhD student Andreea Radulescu on our website, which already carries the Athena

Swan logo throughout. (Action 3.5b). We continue to advertise PhD opportunities to our taught students (Action 3.5d)

In our last submission, we planned to expand our Student Ambassador programme to PhD applicants (Action 3.5c). However, the recent Postgraduate Research Experience Survey 2015, though highlighting many areas of success, also identified issues around support and barriers to completion of PhDs which have changed our approach. Following a series of PhD focus groups across the School, the Strategy Committee considered three recommendations to improve support and communication for PhD students, opting in February 2016 for the creation of a 'family structure' within institutes where students will have a defined 'parent' and 'siblings' (taken from different year cohorts and balanced for gender and nationality) who will help to induct them into the School PhD community and provide peer support. The introduction and establishment of the new PhD family is now incorporated into our current action plan, to be will be implemented in the next academic year (Action X.X).

Postgraduates, like undergraduates, have access to a wide range of advice, events and opportunities offered through our University Careers Service, as well as by the School. For example, in April of this year, Careers ran courses on LinkedIn, CVs and interview techniques, while our Graduate School commissioned Vox coaching to provide two days of communication training: Impact and Influence, and Stand and Deliver. Stand and Deliver was given twice, as attendance was limited to a maximum of 20 students per course.

(v) **Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees**

a. Undergraduates

Table 8: Ratio of course applications to offers and acceptances by gender for undergraduate degrees¹

| Undergraduate Admissions | | Application | | Offer | | Acceptance | |
|--------------------------|--------|-------------|------|-------|------|------------|------|
| | | Count | % | Count | % | Count | % |
| 2011/12 | Female | 215 | 16.9 | 89 | 41.4 | 29 | 32.5 |
| | Male | 1057 | 83.1 | 360 | 33.5 | 101 | 28.1 |
| | Total | 1272 | | 449 | 35.3 | 130 | 30.0 |
| 2012/13 | Female | 213 | 16.5 | 113 | 53.5 | 25 | 22.1 |
| | Male | 1077 | 83.5 | 543 | 50.4 | 160 | 29.5 |
| | Total | 1290 | | 656 | 50.8 | 185 | 28.2 |

¹ Note that % is the proportion of the previous state (ie. proportion of those offered who subsequently accepted).

| | | | | | | | |
|-----------|--------|------|------|-----|------|-----|------|
| 2013/14 | Female | 212 | 15.8 | 106 | 50.0 | 33 | 31.1 |
| | Male | 1129 | 84.2 | 622 | 55.1 | 139 | 22.3 |
| | Total | 1341 | | 728 | 54.2 | 172 | 23.6 |
| 2014/15 | Female | 279 | 19.4 | 190 | 68.1 | 50 | 26.3 |
| | Male | 1159 | 80.6 | 688 | 59.3 | 179 | 26.0 |
| | Total | 1438 | | 878 | 61.1 | 229 | 26.1 |
| 2015/2016 | Female | 407 | 20.7 | 213 | 52.3 | 45 | 21.1 |
| | Male | 1557 | 79.3 | 697 | 44.8 | 153 | 21.9 |
| | Total | 1964 | | 910 | 46.3 | 198 | 21.7 |

While UCAS figures show a decline in female computer science students in the UK, the number of women applying to study at undergraduate level in our School has increased steadily as the overall intake has increased. Out of 215 female applicants in 2011/12, 89 women received an offer and 29 offers were accepted compared to 407 applications, 213 offers and 45 acceptances in 2015/16.

The proportion of undergraduate applications from women has risen from 16.9 to 20.7%, and a higher percentage of women (52.3%) were offered places this year. Although proportionally fewer accepted (21.1% in 2015/16 compared to 32.5% in 2011/12), the figures for men have also gone down and there has been variation from year to year, indicating that this is not an issue of gender bias. Nevertheless, we would like more high quality female applicants and more women accepting places.

In 2014, 83 undergraduate applicants responded to a survey of people who declined a place in our school (16 female, 51 male, 16 unknown). When asked their main reasons for declining, 29% said they preferred a degree at a different university, 11% said Edinburgh was too far from home, 7% found the tuition fees too high, 7% found the entry requirements too high and 4% felt the University didn't feel welcoming.

b. Postgraduates

Figure XX: Proportion of male and female postgraduate research cohort

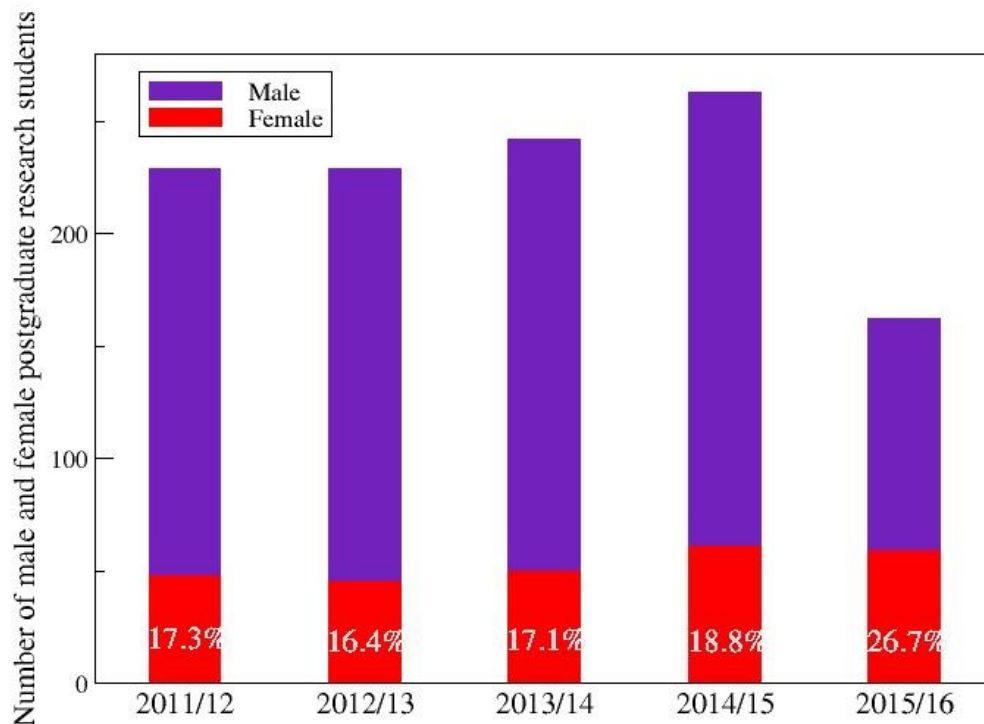
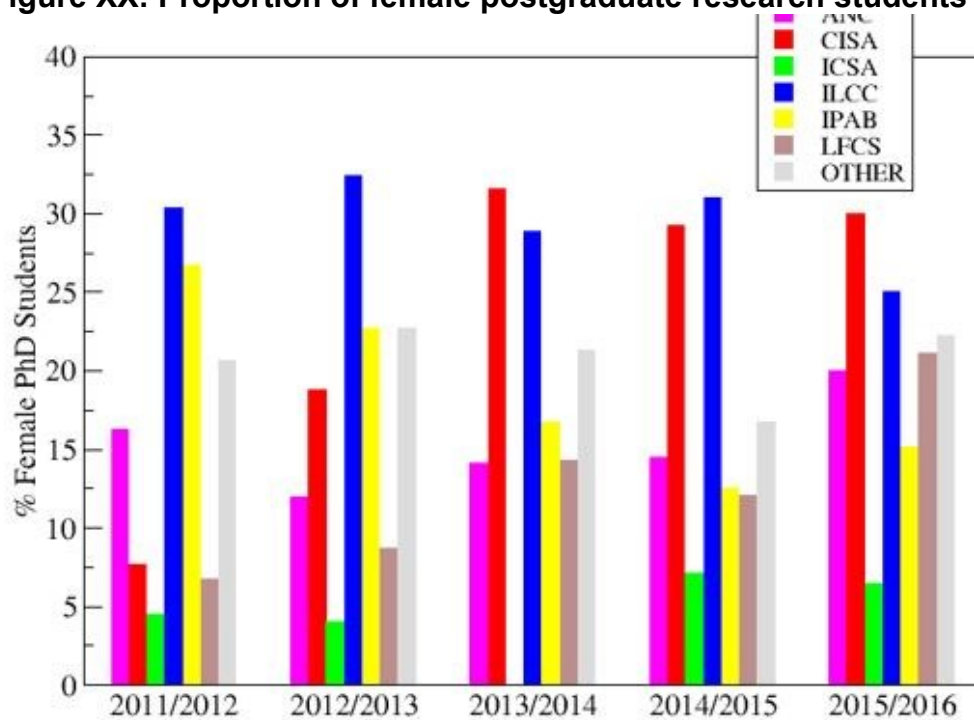


Figure XX: Proportion of female postgraduate research students by institute



There is a need for more female postgraduate research students across all our institutes. The percentages vary from about 6% in the Institute of Computing Systems Architecture

(ICSA) to 30% in Centre for Intelligent Systems and their Applications (CISA). The Institute of Language, Cognition and Computation (ILCC) sits at 25%.

Numbers in our oldest and one of our largest institutes, the Laboratory for Foundations of Computer Science (LFCS), are rising slowly but steadily which is heartening while numbers in the Institutes of Perception, Action and Behaviour (IPAB) and Adaptive and Neural Computation (ANC) are starting to increase after a period of decline.

Although it is worth noting that in smaller institutes, eg. IPAB, ICSA, where the number of students and staff is very small, one person completing their studies and leaving can have a significant impact on the gender balance of the group, that only serves to highlight the importance of attracting far more of the brightest female as well as male final year undergraduates and taught MSc students to our School.

Taught MSc students

The number of women applying and being accepted for taught MSc programmes has increased. Where 325 applied, 210 were offered places and 58 accepted in 2011/12, 416 applied, 97 received offers and 97 accepted in 2015/16. A proportionately higher number of women are being offered places, indicating no selection bias.

Table X: Ratio of course applications to offers and acceptances by gender for postgraduate degrees²

| Postgraduate Taught Admissions | | Application | | Offer | | Acceptance | |
|--------------------------------|--------|-------------|------|-------|------|------------|------|
| | | Count | % | Count | % | Count | % |
| 2011/12 | Female | 325 | 24.2 | 210 | 64.4 | 58 | 25.8 |
| | Male | 1016 | 75.8 | 593 | 58.3 | 167 | 25.5 |
| | Total | 1341 | | 803 | 59.8 | 225 | 28.0 |
| 2012/13 | Female | 299 | 24.1 | 201 | 67.2 | 56 | 27.8 |
| | Male | 944 | 75.9 | 494 | 50.4 | 126 | 25.5 |
| | Total | 1243 | | 695 | 55.9 | 182 | 26.2 |
| 2013/14 | Female | 332 | 30.3 | 169 | 50.9 | 49 | 29.0 |
| | Male | 763 | 69.7 | 319 | 41.8 | 119 | 37.3 |
| | Total | 1095 | | 448 | 40.9 | 168 | 37.5 |
| 2014/15 | Female | 347 | 29.7 | 172 | 49.5 | 53 | 30.8 |
| | Male | 820 | 70.3 | 367 | 44.7 | 131 | 35.7 |
| | Total | 1168 | | 539 | 46.1 | 184 | 34.1 |
| 2015/2016 | Female | 416 | 30.3 | 247 | 59.3 | 97 | 39.2 |
| | Male | 953 | 69.7 | 537 | 57.4 | 235 | 43.7 |
| | Total | 1369 | | 786 | 57.4 | 332 | 42.2 |

² Note that % is the proportion of the previous state (ie. proportion of those offered who subsequently accepted).

Table XX: Ratio of course applications to offers and acceptances by gender for postgraduate research degrees³

| Postgraduate Research Admissions | | Application | | Offer | | Acceptance | |
|----------------------------------|--------|-------------|------|-------|------|------------|------|
| | | Count | % | Count | % | Count | % |
| 2011/12 | Female | 70 | 18.5 | 19 | 27.1 | 14 | 73.7 |
| | Male | 309 | 81.5 | 75 | 24.3 | 61 | 81.3 |
| | Total | 379 | | 94 | 24.8 | 75 | 79.9 |
| 2012/13 | Female | 129 | 24.0 | 29 | 22.5 | 16 | 55.2 |
| | Male | 409 | 76.0 | 83 | 20.3 | 63 | 75.9 |
| | Total | 538 | | 112 | 20.8 | 79 | 70.5 |
| 2013/14 | Female | 98 | 20.5 | 20 | 20.4 | 16 | 80.0 |
| | Male | 381 | 79.5 | 103 | 27.0 | 63 | 61.1 |
| | Total | 479 | | 123 | 25.7 | 79 | 64.3 |
| 2014/15 | Female | 132 | 21.1 | 22 | 16.7 | 21 | 95.5 |
| | Male | 495 | 78.9 | 99 | 20.0 | 79 | 79.8 |
| | Total | 627 | | 121 | 19.3 | 100 | 82.6 |
| 2015/2016 | Female | 123 | 20.2 | 24 | 19.5 | 21 | 87.5 |
| | Male | 481 | 79.8 | 115 | 23.9 | 99 | 86.1 |
| | Total | 604 | | 140 | 23.2 | 120 | 85.7 |

Acceptance rates are high across genders and have increased for women since 2011/12. While the number of postgraduate research applications from women and men has risen overall, from 379 to 604 in 2015/16 (of whom 123 or 20.2% were women), the rise in female applicants is smaller and more erratic, and there has been a decline in the percentage of offers they have received. Where 19 of 70 female applicants received offers in 2011/12, prompting 14 acceptances, only 24 out of 123 women received offers in 2015/16, 21 of whom accepted.

³ Note that % is the proportion of the previous state (ie. proportion of those offered who subsequently accepted).

We would like to attract more highly qualified women to study at PhD level. To this end, we have held two Women in Computing events, to attract students from a range of universities, with another planned in 2016. Highlights include distinguished speakers such as Professor Barbara Grosz, Higgins Professor of Natural Sciences, Harvard University, together with representatives from industry. The last event in 2014 was attended by about 50 students. Another Women in Computing event is planned for **WHAT DATE** 2016.

Funding is a key issue for all PhD students, especially from overseas. We will address this by developing a strategic recruitment plan to attract the brightest and best UK/EU female PhD applicants, which will include targeted marketing of feeder universities and developing our Women in Computing event to include workshops on funding, finding the right research project and finding the right supervisor.

We will continue to promote PhD funding opportunities to our undergraduate and taught Masters students and will investigate the possibility of providing more research scholarships for Women in Infomatics, awarded on academic merit.

Staff data

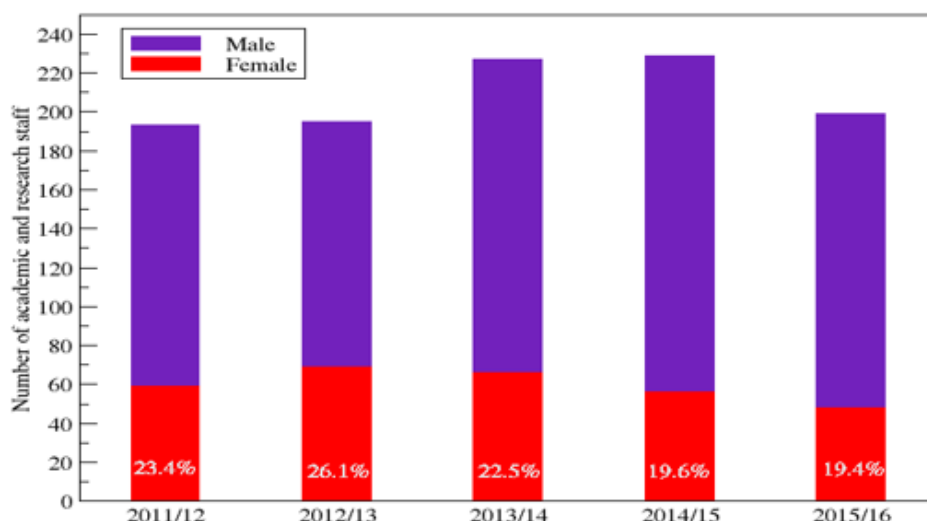
- (vi) **Female:male ratio of academic staff and research staff – researcher, lecturer, senior lecturer, reader, professor (or equivalent).**

Staff data is provided, using the following University-wide standard academic grades:

| Grade | Position |
|-------|---|
| UE06 | Research Assistant/Associate |
| UE07 | Postdoctoral Research Fellow |
| UE08 | Lecturer/Research Fellow |
| UE09 | Senior Lecturer/Reader/Senior Research Fellow |
| UE10 | Professor/Personal Chair, or equivalent |

Members of staff appointed to grades UE08-UE10 with contracts requiring teaching and research are termed 'Academic staff,' whilst those on grades UE06-UE09 who are in research-focused roles are termed 'Research staff.'

Figure X: Proportion of female:male academic and research staff



There are 247 academic and research staff in the School, of whom 48 are women and 199 are men. The data shows that while the proportion of female academic and research staff has declined from 26.1% in 2012/13 to 19.4% in 2015/16, there has been an increase in women in senior roles, with three promotions to Senior Lecturer and two promotions to Professor since 2011/12. (There has also been one promotion to Lecturer, with another pending in 2015/16). We have eight female Professors. As most staff – male or female – who apply for promotion have been successful, we need to encourage and support more female staff to apply for promotion internally. We have introduced initiatives to facilitate this, including coaching, mentorship and leadership training (see section 4), which now need to be mainstreamed.

Figure XX: Female academic and research staff – applications per year

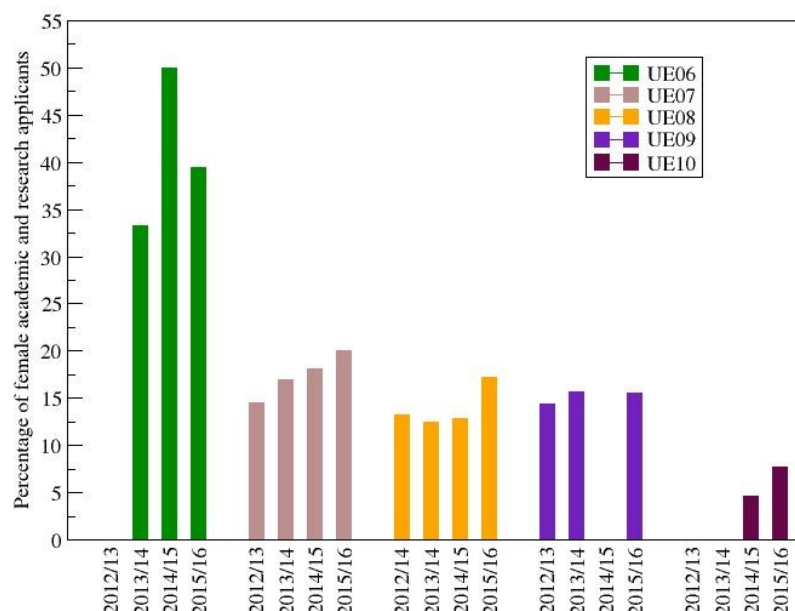
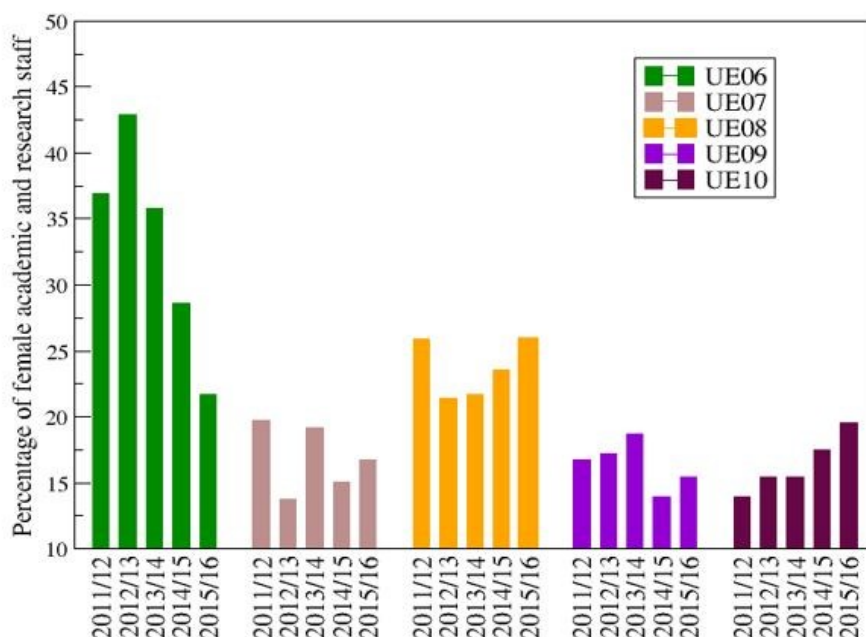


Figure XX: Female academic and research staff – grades per year



The proportion of female applicants for academic and research positions has increased for all grades since 2012/13. This year, two women have expressed an interest in taking advantage of the Equate Scotland Coaching for Success programme.

Fewer women are leaving the School. Eighteen female academic and research staff and 57 male staff left in 2010/11, compared to eight female and 33 male in 2014/15 (four women and 22 men to date in 2015/16). The majority of staff turnover continues to be in research grades UE06, UE07, and UE08, rather than in more senior permanent members of staff. This ongoing trend is a consequence of the fixed-term contract structure that predominates for research appointments. Turnover does not appear to be abnormally high or to affect women disproportionately. We will continue to monitor data annually (Action 2.1).

All research staff reaching the end of a fixed-term contract are encouraged to enter their details in the University's online Talent Register. Recruiters throughout the university are then obliged to consider any candidates in the register who meet the essential criteria for the post. This provides many opportunities for researchers to move on, either within the School, or into other schools. We also proactively manage contract end points and transitions internally through embedded Portfolio Managers within our research institutes who can identify opportunities for staff redeployment across a broader portfolio of funding awards. Many research staff are stably employed in this manner. This strategy will continue (Action 4.1c).

- (vii) **Turnover by grade and gender – where numbers are small, comment why individuals left**

Table X: Turnover by grade and gender

| | UE06 | UE07 | UE08 | UE09 | UE10 |
|----------------|------|------|------|------|------|
| 2010/11 | | | | | |
| Male | 17 | 27 | 7 | 2 | 4 |
| Female | 12 | 4 | 1 | 0 | 1 |
| Total | 29 | 31 | 8 | 2 | 5 |
| 2011/12 | | | | | |
| Male | 20 | 21 | 4 | 2 | 2 |
| Female | 18 | 8 | 1 | 0 | 0 |
| Total | 38 | 29 | 5 | 2 | 2 |
| 2012/13 | | | | | |
| Male | 23 | 38 | 5 | 0 | 1 |
| Female | 14 | 13 | 0 | 0 | 0 |
| Total | 37 | 51 | 5 | 0 | 1 |
| 2014/15 | | | | | |
| Male | 4 | 24 | 2 | 1 | 2 |
| Female | 4 | 4 | 0 | 0 | 0 |
| Total | 8 | 28 | 2 | 1 | 2 |
| 2015/16 | | | | | |
| Male | 5 | 11 | 3 | 3 | 0 |
| Female | 0 | 3 | 1 | 0 | 0 |
| Total to date* | 5 | 14 | 4 | 3 | 0 |

* *Italics* = data to date

Supporting and advancing women's careers – maximum 5000 words

Please provide a report covering the following sections 4 – 7. Within each section provide data and a short analysis for at least the last three years (including clearly labelled graphical illustrations where possible) on the data sets listed, commenting on changes and progress made since the original application, and including details of successes and where actions have not worked and planned initiatives going forward.

Please also attach the action plan from your last application with an additional column indicating the level of progress achieved (e.g. zero, limited, excellent, completed).

4. Key career transition points

(i) Job application and success rates by gender and grade

Table X: Job applications and success rate by grade and gender*

| Grade/ gender | Applics received | Appointed (%) | Applics received | Appointed (%) | Applics received | Appointed (%) | Applics received | Appointed (%) |
|------------------|---------------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|---------------|
| | 2012/13 | | 2013/14 | | 2014/15 | | 2014/16 | |
| UE06 | | | | | | | | |
| Male | N/A | N/A | 44 | 3 (6.8) | 24 | 2 (8.3) | 72 | 2 (2.7) |
| Female | N/A | N/A | 22 | 2 (9.1) | 24 | | 47 | - |
| Total | N/A | N/A | 66 | 5 (7.6) | 48 | 2 (4.2) | 119 | 2 (1.7) |
| UE07 | | | | | | | | |
| Male | 214 | 17 (6.8) | 288 | 25 (8.7) | 272 | 18 (6.6) | 96 | 2 (2.1) |
| Female | 43 | 5 (9.1) | 59 | 2 (3.4) | 60 | 4 (6.6) | 24 | 1 (4.2) |
| Total | 296 | 22 (7.4) | 347 | 27 (7.8) | 332 | 22 (6.6) | 120 | 3 (2.5) |
| UE08 | | | | | | | | |
| Male | 294 | 2 (0.7) | 56 | 1 (1.8) | 54 | 1 (1.8) | 48 | 2(4.2) |
| Female | 46 | 1 (2.2) | 8 | 1 (12.5) | 8 | | 10 | 1 (10) |
| Unknown | 9 | | | | | | | |
| Total | 349 | 3 (0.9) | 64 | 2 (3.1) | 62 | 1 (1.6) | 58 | 3 (5.2) |
| UE09 | | | | | | | | |
| Male | 64 | 6 (9.4) | 118 | 1 (0.8) | - | - | - | - |
| Female | 13 | 1 (7.7) | 22 | - | - | - | - | - |
| Unknown | 13 | | | - | - | - | - | - |
| Total | 90 | 7 (7.8) | 140 | - | - | - | - | - |
| UE10 | | | | | | | | |
| Male | - | - | - | - | 20 | 1 (5.0) | 4 | 1 (25.0) |
| Female | - | - | - | - | 1 | | 1 | |
| Total | - | - | - | - | 21 | 1 (4.8) | 5 | 1 (20.0) |

* We are unable to provide accurate figures prior to October 2012 when the University ERecruitment system was introduced. We do not retain application information in paper form for more than 6 months.

Within a School of this size there is a large number of contract research positions each year so we see substantial recruitment activity. Informatics is supported by dedicated HR admin staff, 'InfHR,' embedded within the School. InfHR supports all aspects of the recruitment and subsequent employment process. This ensures a consistency of approach and specifically that the recruitment process (short listing, interviewing and selection) is carried out in compliance with the University's equal opportunities policies. Following University policy, we ensure that there is at least one woman on every panel for academic posts.

An integral part of our recruitment strategy is relocation assistance. The University offers a relocation package to academic staff at UE08 and above. The School offers generous 'start up' funds for new lecturing staff and above, which can be of particular importance for those with young families.

For contract research positions (mostly UE06 and UE07) the proportion of women recruited often exceeds the proportion of men and is similar to or higher than the average of staff recruited.

(ii) **Applications for promotion and success rates by gender and grade**

| | UE08 | | UE09 | | UE10 | |
|---------|---------|------------|---------|------------|---------|------------|
| | Applied | Successful | Applied | Successful | Applied | Successful |
| 2011/12 | | | | | | |
| Male | 2 | 2 | 5 | 5 | 3 | 3 |
| Female | 0 | 0 | 1 | 1 | 0 | 0 |
| 2012/13 | | | | | | |
| Male | 0 | 0 | 6 | 5 | 1 | 1 |
| Female | 0 | 0 | 1 | 1 | 0 | 0 |
| 2013/14 | | | | | | |
| Male | 2 | 2 | 4 | 4 | 1 | 0 |
| Female | 0 | 0 | 2 | 1 | 2 | 2 |
| 2014/15 | | | | | | |
| Male | 1 | 1 | 4 | 4 | 1 | 1 |
| Female | 1 | 1 | 0 | 0 | 0 | 0 |
| 2015/16 | | | | | | |
| Male | 1 | --- | 4 | --- | 3 | --- |
| Female | 1 | --- | 0 | --- | 1 | --- |

The promotion success rate is close to 100% amongst female applicants over recent years. We find no evidence of bias against women in promotions. Overall promotion rates for female staff are in line with total female staff numbers. Promotions outcomes for 2015/216 are pending at the time of writing (denoted by --- in the table).

The routes and timetable for promotion are set by the University. When the dates are announced, an email is sent to the appropriate staff group and their line managers inviting applications. Institute Directors also play a role in proactively identifying potential applicants amongst academic staff. Potential cases are then discussed by a meeting of all the

professoriate. Cases selected to go forward are assigned a mentor to help them prepare the strongest possible application for consideration at College and University level. This careful selection and support for applicants is reflected in the success rates.

Research staff have a number of complementary routes. Most are initially approached by the Principal Investigator (PI) of their research, some consult the in-School HR admin team, some may also take advice from senior role models such as the Head of School. The staff member and PI will co-develop the case. At any point staff are also able to self-nominate. Detailed process guidance is available and we have developed training workshops for those contemplating promotion (**Action 5.6a**).

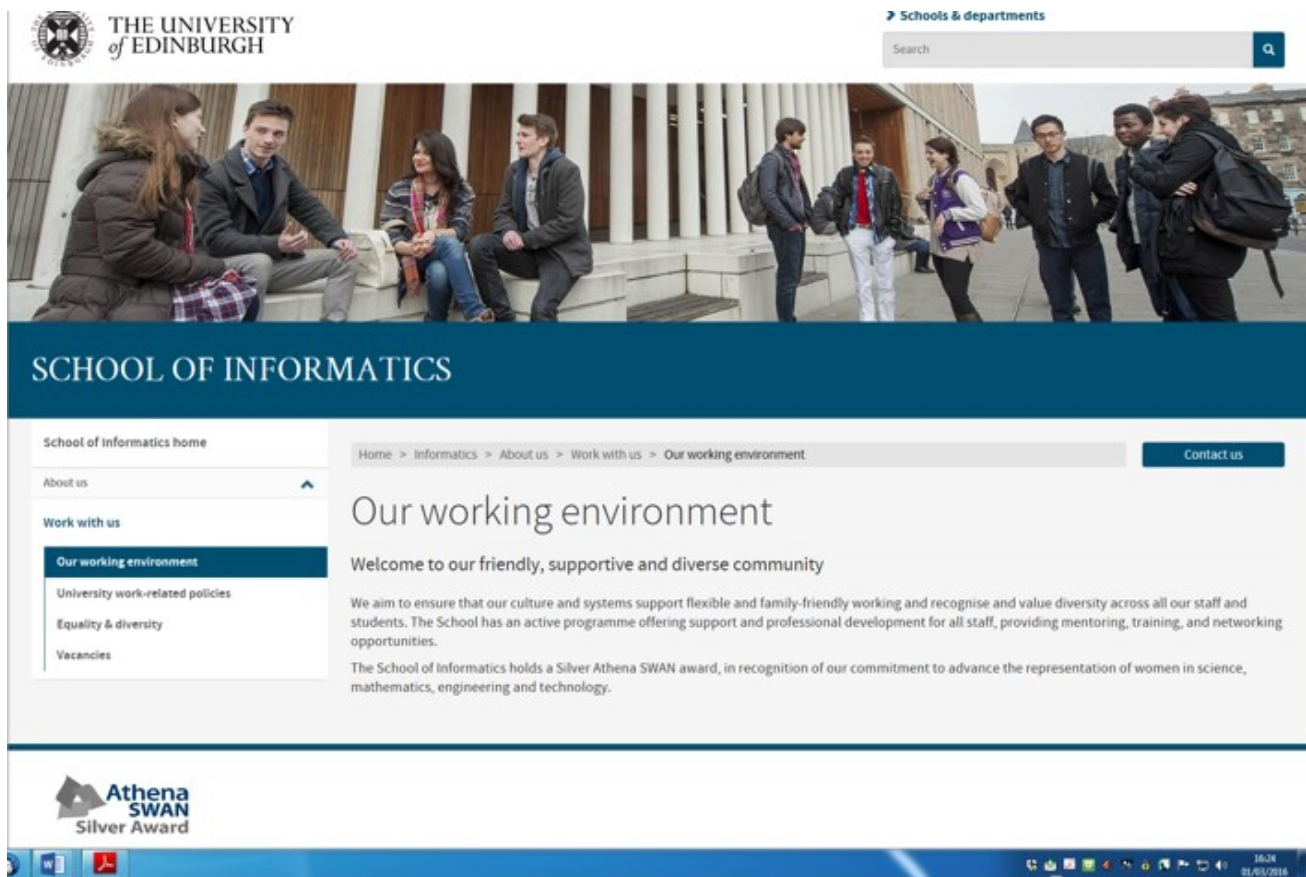
An alternative route to promotion is through the creation of a new post at a higher grade on a research grant, the researcher being named researcher for the position. In these cases the explicit promotion process described above is not followed but a rigorous HR procedure assesses grade appropriateness. This provides a valuable route to retain many of our experienced researchers, and female members of our SAT have been promoted by this route. However, there is a lack of women putting themselves forward for promotion so we are undertaking several actions to address this. We will continue to organise workshops on the promotion process (**Action 5.6a**) and continue to offer mentoring (**Actions 5.5**) and career coaching through Equate Scotland's Coaching for Success programme (formerly SRC Coaching for Success (**Action 5.2**)).

Our latest staff survey and Action Plan brainstorming workshop emphasised the importance of a productive Performance and Development Review (P&DR). The new section of our website, Work with us, now includes a link to P&DR process for reviewers and reviewees described in detail on the College of Science and Engineering's website, showing what the whole review process entails from beginning to end.

(iii) Impact of activities to support the recruitment of staff – 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

All job advertisements now include a statement about our family-friendly culture and systems, which also appears in the the 'new 'Work with us' section of our website:

Screenshot: Statement about our family-friendly culture



We are also beginning to ensure that, where possible, job ads include a female point of contact. The point of contact for Professorial appointments is our Head of School, Professor Johanna Moore.

The University of Edinburgh requires all who are staff involved in recruitment and promotion panels to undergo Unconscious bias training, and offers three online learning modules relevant to staff recruitment:

- Recruitment, selection and the law (one to two hours online)
- e-Diversity in the workplace (one to two hours online)
- Overcoming unconscious bias (15-30 minutes online)

The School of Informatics' requires interview panellists to undergo Unconscious bias, Recruitment and e-Diversity training as outlined in the tale below.

In March 2015, the SAT team invited Dr Peter Jones, a Chartered Psychologist, Chartered Scientist and Psychometrician to deliver training on 'The impact of implicit bias in higher education,' which was open to all staff. This session explored the potential impact of implicit bias on attracting and assessing students, selecting staff and supporting them in their careers. Although there was a focus on gender and ethnicity, Dr Jones also described the

research around issues such as bodyweight, height and physical attractiveness. He also reviewed and summarised the research around 'what works' in mitigating implicit bias and introduced a model for making personal change.

Staff who missed the session were offered the opportunity to attend one of two further sessions, organised by the College of Humanities and Social Science, December 2015.

Our next planned step is to organise a tailored session with senior staff before rolling the training out to out to other colleagues.

Table XX: School of Informatics' requirements for interview panels

| | Online training courses | | |
|--|---|------------------------------|------------------|
| | Recruitment, selection and the law | e-Diversity in the workplace | Unconscious bias |
| Panel chair | Essential | Strongly encouraged | Essential |
| University of Edinburgh panel members | Strongly encouraged | Strongly encouraged | Essential |
| External members | Recommended that similar training be undertaken as provided by own institution/organisation | | |
| Please note: (i) Training should have been undertaken within the last two years; (ii) staff are also encouraged to undertake the one day Recruiting for Excellence course, available face-to-face and bookable through the University's staff/student portal MyEd; (iii) staff are asked to advise Informatics HR when they have completed the training. | | | |

- (iv) Impact of activities to support staff at key career transition points – interventions, programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training.**

Whilst our predominant challenge is the flow of qualified women graduates the data shows that we also see some attrition of women at the transition point from senior researcher to academic staff member.

The University administers an online staff exit survey which aims to identify why staff leave the University. The most recent summary of feedback on our School (January -

August 2015) included 15 responses from academic/research staff leavers and five from support staff. Of these, 14 were male and six were female. All of the respondents felt that the description of the role provided in recruitment material was accurate. Eight said they had received an induction when they started, five of whom said it was useful. Holidays, internal communications (intranet, newsletters, wikis, etc), ability to balance work and personal commitments and the physical working environment were all positively rated. Equality of opportunity was rated 'good' (the highest available rating) or 'fair' by all who responded. Career development/ progression, communication within team and work related training received lower ratings. Two respondents rated childcare provision 'good' or 'fair,' other respondents 'did not know.' Ten respondents 'always' received an annual appraisal and three 'sometimes' received an annual appraisal. Other responses on line management/supervision were mixed and, through by no means all negative, indicate room for improvement in some areas. Discussion of opportunities for career advancement was rated particularly low. Four respondents said that they were not made aware of training and development opportunities. Reasons for leaving included career advancement (seven) and end of funding (six). Six respondents cited dissatisfaction with the job and two cited relationship with manager. Multiple responses (up to three) were permitted.

The School considers exit survey feedback alongside current staff surveys, takes the findings very seriously and has taken steps to improve induction and communication about training and development opportunities.

Our School Plan for 2016-19 includes a commitment to "review and improve our induction processes and support for personal and career development, including through mentoring of early career staff by senior academics."

With effect from April 2016, a revised induction process for new academic and research staff will include enhanced pre-start information and a more structured 'longitudinal' approach to ensuring that staff are supported through their first months in the School. Each individual's induction will be monitored by the School's HR admin team, who will be able to signpost additional support, if required.

The annual Performance and Development Review (P&DR), launched in 2011, has been established as a standard process within the School, with completion rates increasing year-on-year and in excess of 90% completion achieved in 2014/15. On an annual basis, InfHR contacts all staff and their line manager or, for academic and research staff, their selected appraiser 2-3 months in advance of the proposed due date of the P&DR, to allow time for the meeting to be scheduled and the paperwork completed. We have revised the standard documentation for academic performance and development reviews to explicitly address impact, learning and teaching, public engagement and management and admin duties.

We will continue to ensure that career review opportunities are taken up by all staff, in line with University policy but, as recognised in our School Plan 2016-19, "We

need to make performance and development review a more meaningful experience for more of our staff and ensure that more staff participate in the staff development opportunities available to them.” Academic P&DR documentation has been updated to include explicit reference to teaching and admin duties, as well as research and impact. We are investigating whether we can use the School duties database to make information on current teaching and admin duties available to appraisees and appraisers, to encourage discussion of these, as part of the P&DR process.

We are also reviewing our Performance and Development Review process to ensure that staff development needs and opportunities are a priority topic for discussion.

We will also increase the frequency of our staff newsletter to bi-monthly, to draw attention to forthcoming training events and other staff development opportunities organised by the School, University and by relevant external providers eg. Leadership Foundation for Higher Education, Equate Scotland etc

We will continue to:

- organise Information Lunches, annual since 2013, on topics which so far have included the promotions procedure, grant funding and information access (Action X.X)
- offer career coaching to female staff who are at key transition points through Equate Scotland's Coaching for Success Programme (Action X.X).

“I had 6 sessions with an external life coach (2013). I had been doing a phased return to work after illness, and was then on sabbatical. In some of the sessions I focused on planning to go for promotion. It was very useful and my promotion was successful. I should also add that I met with various other senior staff to get advice on going for promotion - all extremely helpful. Plus I had an appointed mentor who provided a lot of useful advice, encouragement and guidance” (Anonymised staff feedback)

The University offers a wide range of training, learning and development opportunities throughout the academic year, advertised via the staff/student portal MyEd and/or on its Teaching matters website. Topics range from Designing and Delivering Lectures to Allocating, Monitoring and Supporting Work, Creating a Data Management Plan for your Grant Application, and everything in between. In addition the School has its own staff development budget and the Equality and Diversity Committee uses its budget to organise events and fund training.

We would like to support our Principal Investigators to undertake more training. Examples of regular University courses which we will promote include Leadership styles, Developing your Staff, Giving Effective Feedback, Practical Project Management and Bite-sized Project Management. In 2017/18, the School will

organise some more tailored training, in association with the University's Institute for Academic Development, similar to the 'The PI Briefing - Managing your Research Group' which is compulsory for all existing and new Principal Investigators in the Schools of Clinical Sciences and Molecular, Genetic and Population Health Sciences, and then hold a refresher course every five years.

We also work to encourage women to represent the School more, externally and/or internally. The E&D committee routinely sponsors female staff and students to attend relevant conferences and events, providing travel funds for members of the School to attend the Grace Hopper conference, BCSWomen Lovelace Colloquium, womENCourage and the London Hoppers Colloquium (2014-2016).

Although the proportion of female academic and research staff who have undertaken training in gender equality and unconscious bias has increased compared to 2012, the percentage is still low (30-50%) and **we address this in our action plan.**

The Equality and Diversity Committee organises and/ or promotes a number of events to encourage networking within the School, across the University and in the wider science and technology community. As well as social networking, such as the fore-mentioned Informatics Jamboree, (April 2014, March 2015, **May 2016**) and in-house seminar series etc, professional networking opportunities have included the BCSWomen Ada Lovelace Colloquium (Oct 2015), Women in Computing events, **STEM Scotland 2016 conference (MARTIN, HAS ANYONE TAKEN YOU ON YOUR OFFER?)** and attendance at a recent Breakfast Seminar, Women in Technology: Bridging the Gender Gap? (February 2016).

Across the University, the Mentoring Connections programme provides all staff with time and space to meet with a mentor/mentee to talk through a variety of issues that affect them at various stages of their career and development, for example work life balance, career development, or promotion paths. **DO WE KNOW HOW MANY INFORMATICS WOMEN/MEN HAVE BEEN INVOLVED IN THIS PROGRAMME?**

Within the School, new members of academic staff are offered a mentor to advise them and this relationship persists as long as the mentee finds it useful. One of our cases studies mentions her appreciation of this initiative in section 10.

At senior level, the University provides Heads of School with an induction programme which includes 3 x 4 hour workshops plus pre and post workshop sessions to identify personalised objectives and actions. This is supplemented by College-specific sessions with Heads of College, Vice-Deans, College Registrars and others as appropriate. This is followed, after a year, with an automatic offer of feedback and coaching which aims to enhance confidence, identify strengths, weaknesses and challenges and create a personal work action plan. **QUOTE FROM JOHANNA SAYING HOW SHE FOUND IT HELPFUL**

The University also offers a comprehensive four day modular Leadership Programme for senior staff currently in headship roles or who may be in such roles soon. HOW DO WE FIND OUT WHO/HOW MANY OF OUR STAFF HAVE DONE THIS SINCE 2013? IF WE KNOW WHO, WE CAN ASK THEM FOR A QUOTE

In 2015, for the first time, the School took part in the Aurora Leadership Foundation for Higher Education (LFHE) women-only leadership development programme. This will be offered on an annual basis in future. One Grade UE09 academic received funding from the University to attend. The School is happy to fund more places and will promote the programme and encourage more staff to attend, however there are restrictions on the number of places available to the University.

5. Career development

- (i) Impact of activities to support promotion and career development – appraisal, career development process, promotion criteria.

The Equality and Diversity Committee ran three promotions events, October-December 2015, one for junior staff, one for senior staff and one for early career researchers. The workshops included talks followed by a Q&A session. Both the Head of School and Director of Professional Services attended. All those who attended found the events useful. Some indicated that it would have been helpful to have the events earlier in the year, a comment which has now been taken on board.

- (ii) Impact of activities to support induction and training – support provided to new staff at all levels, and any gender equality training.

DO WE HAVE ANY STATS / QUOTES ON THE IMPACT OF INDUCTION AND TRAINING GENERALLY? PLEASE ADVISE!

The University appoints around 30 Chancellor's Fellows each year. These are high-potential academics in the early stages of their careers who have begun to establish a reputation for top quality research. In 2015 the School arranged a networking lunch so that our six Chancellor's Fellows and some former Chancellor's Fellows (now staff) could meet with the Head of School, Director of Professional Services and Equality and Diversity Co-ordinator to discuss their experiences of the School so far. All the participants said they found the event useful and would welcome the opportunity to take part in a similar event once or twice a year. They found the interaction with Head of School and their peers most useful. In turn, the Head of School and Director of Professional Services valued their feedback on issues which can now be addressed, including:

- Standardisation of the induction process
- Regular induction event for new staff on a twice yearly basis
- An induction to teaching in the School of Informatics, especially for those with limited previous experience or no previous experience of Scottish/UK higher education
- Presentation by the Informatics Teaching Organisation (ITO) about its role / key contacts, business processes and deadlines (eg. for exam papers)
- School-wide talks so that new Chancellor's Fellows can introduce themselves and their research to the wider Informatics community
- Announcements of new appointments, eg. by email or in the regular Head of School letter.

- (iii) Impact of activities that support female students – 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.**

At undergraduate level, every undergraduate student has as a Personal Tutor, a member of the teaching staff who provides academic guidance and support. Personal Tutors work with students to help them review their academic progress, reflect on how their learning can help them to pursue their future development, engage with a community of learners and address any concerns or problems that might affect their studies.

The School offers Peer Assisted Learning (PAL), a system of student-to-student support where students in their first year of their degree are supported in their studies by older students (PALS group facilitators), who facilitate sessions. As at other universities across the UK, our system – InfPAL – aims to support first year students through the transition to Higher Education whilst developing their learning and study strategies, such as exam and revision techniques.

Activities to improve support for postgraduate students through the creation of an academic ‘family structure’ is described in section 3. On a more informal level, Hoppers – our society for female Informatics students by Informatics students – continues its 10-year tradition of organising talks, workshops and events while SNACK Club provides an opportunity for all PhD students to get together, hear presentations on career-related topics and network. In February this year, Rosa Filgueira and three other postdoctoral researchers shared their experiences of academia with a packed audience. In October, the SNACK Club heard from eight speakers who had recently had internships at Google, Microsoft, Microsoft Research, Oracle and Samsung.



“SNACK offers students the opportunity to give and attend talks and share experiences in a more personal and friendly way – and it is a popular event for networking.” Ludovica Luisa Vissat (pictured right)

In October 2014, the Equality and Diversity Committee supported a peer engagement event for female PhD students focusing on building networks, reducing isolation and exchanging information about future career paths. The event was organised by postgraduate students Clare Llewellyn (a member of the E&D Committee at the time) and Alyssa Alcorn.

In February 2016, PhD student and SAT member Alina Selega attended a Women in Technology breakfast seminar on behalf of the Committee.



"Attending the Women in Technology breakfast seminar gave me new insights into the means of attempting to tackle the gender imbalance problem and importantly, justifications for such means. Understanding the different experiences of men and women in STEM, the effects of the current gender distribution on the field, and what exact goal we are trying to achieve is essential when addressing this problem." Alina Selega

6. Organisation and culture

(i) **Male and female representation on committees – provide a breakdown by committee.**

The predominant mechanism of selection for committee service is by role rather than by individual. As a result, the Head of School (currently female) chairs the Building Committee, Strategy Committee and Health and Safety Committee. The Recruitment Committee and Equality and Diversity Committee are Chaired by the Recruitment Officer and the Equality & Diversity Coordinator (both female). The Board of Studies and Teaching Committee are chaired by the Director of Teaching and the Research Committee is chaired by the Director of Research (both men). The leadership roles within the school are assigned as part of the annual allocation of duties (described under Workload Model below). The Head of School encourages women to consider senior management roles but as leadership positions within the School that confer committee memberships are typically rotated every three years, the situation of committee overload on female staff is closely monitored and avoided.

In addition to the committees within the School, the School also has representation on a variety of College-level committees. Similarly to School committees, membership of these committees is generally given by post or responsibility rather than to individuals.

Table XX: Sample committee, the Strategy Committee

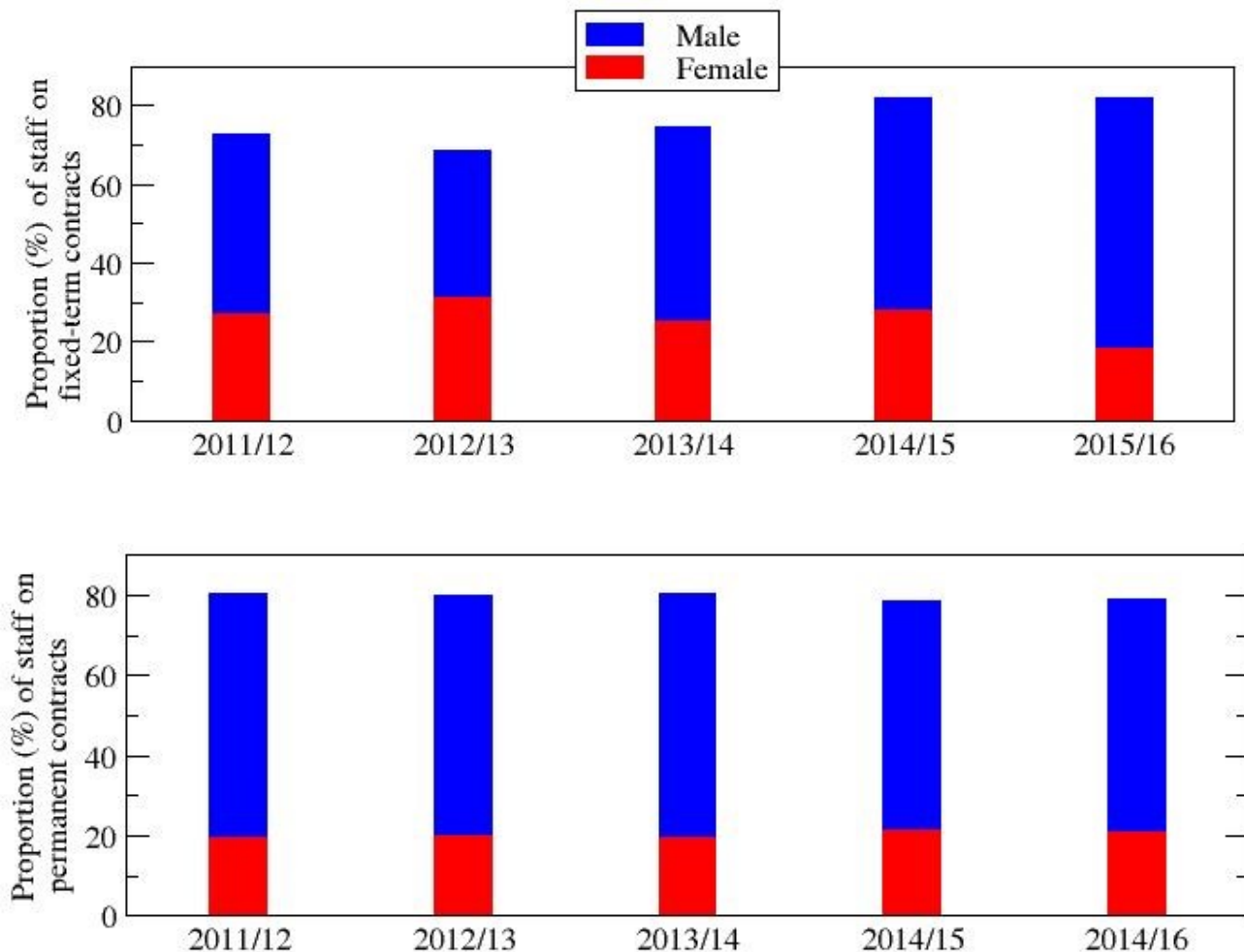
| Role | Name | Gender |
|-----------------------------------|------------------|---------------|
| Head of School (Chair) | Johanna Moore | Female |
| Director of Commercialisation | Colin Adams | Male |
| Deputy Head of School | Stuart Anderson | Male |
| Director of ICOSA | Murray Cole | Male |
| Director of Research | Michael Fourman | Male |
| Director of Teaching | Björn Franke | Male |
| Director of ANC | Nigel Goddard | Male |
| Director of ILCC | Jon Oberlander | Male |
| Director of CISA | Michael Rovatsos | Male |
| Director of LFCS | Don Sannella | Male |
| Director of Computing | Perdita Stevens | Female |
| Director of Graduate School | Nigel Topham | Male |
| Director of IPAB | Barbara Webb | Female |
| Director of Professional Services | Martin Wright | Male |
| Research staff representative | Markus Guhe | Male |
| Secretary to the Committee | Anda Nicolson | Female |

- (ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts**

Table XX: Female:male ratio of staff by gender and contract

| | Gender/total | Fixed term contract | Permanent |
|----------------|--------------------------------|----------------------------|------------------------|
| 2011/12 | Male Female Total | 97 36 133 | 96 25 121 |
| 2011/13 | Male Female Total | 103 47 150 | 92 23 115 |
| 2013/14 | Male Female Total | 136 46 184 | 90 22 112 |
| 2014/15 | Male Female Total | 137 30 167 | 92 25 117 |
| 2015/16 | Male Female Total | 109 24 133 | 90 24 114 |

Graphical analysis illustrates the overall gender split across the two contract types. The first graph shows the proportion of staff on fixed term contracts, the second - permanent.



(iii) Representation on decision-making committees –evidence of gender equality in the mechanism for selecting representatives.

As with School committees, the predominant mechanism of selection for service on College of Science and Engineering Committees is by role rather than by individual.

Table XX: Representation on College Committees

| College Committee | Informatics rep | Gender |
|---|---|---------------|
| Computing and IT | Professor Perdita Stevens Director of Computing | Female |
| Computing Professionals Advisory Group | Alastair Scobie Head of Computing | Male |
| Equality and Diversity | Professor Mirella Lapata Equality and Diversity Coordinator | Female |
| Learning and Teaching | Dr Michael Rovatsos Postgraduate Research Selector | Male |
| Library | Prof Stephen Gilmore Convenor of Library Committee | Male |
| Quality Assurance | Dr John Longley Director of Quality | Male |
| Research | Professor Mike Fourman Director of Research | Male |
| Research Training | Professor Nigel Topham Director of Graduate School | Male |
| Strategy and Management | Professor Johanna Moore Head of School | Female |
| Student Support | Julian Bradfield Senior Personal Tutor | Male |

It is worth noting that during the search for the new Head of School in 2013, female staff were consulted separately and given an opportunity to express their views in a supportive, confidential atmosphere.

- (iv) **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 transparent, fairly applied and are taken into account at appraisal and in promotion criteria.**

All members of the teaching staff are expected to contribute to the School's aims in respect of research and teaching, and to participate in the administrative tasks which these two fundamental activities generate. Contract Research Staff on projects held within the School are encouraged (subject to the agreement of the PI and any funding body constraints) to make small contributions to teaching, commensurate with their abilities and background, in areas such as tutorial provision, project supervision and guest lecturing. Where appropriate and by agreement, other members of the School (eg. computing staff, PhD students) are encouraged to contribute to teaching, in particular through tutoring, demonstrating, marking and project supervision. Low research load may be anticipated and recognised by agreement between individuals concerned and the Head of School and Director of

Teaching. Where agreed, this may lead to an increased teaching or admin load for the individual. A small number of categories of staff may receive lower teaching and admin loads as determined by the Head of School (for example for newly appointed lecturers or in recognition of an exceptionally high workload in other areas). Information on the final allocation is publicly available within the School on our intranet.

The mechanism for work allocation is well established and detailed on our intranet. However, staff had raised issues about fairness and transparency eg. “I don’t feel work is allocated on a clear basis, and therefore have no idea how fair it is (but I often have the impression it’s not very fair).” Respondent, staff culture survey 2015.

As a result of this and other feedback, the School has recently reviewed its workload process, with a view to improving fairness and transparency. Current issues were identified as: resourcing, transparency and compliance. A small working group considered a range of models operating in other Schools, including ones based on detailed points or time allocations for individual duties (both teaching and administrative). Feedback from Schools operating such models was that they were problematic and that there was a move towards higher level allocation models, such as that operated by Informatics.

The principles of the work allocation proposals were that: by default, all academic staff contribute both to teaching and to administrative duties, and that it is the collective responsibility of the body of academic staff to carry the teaching and admin load of the School in any year.

The recommendations of the working group were endorsed by Strategy Committee and detailed proposals developed, based on the agreed principles. These principles are consistent with the School Plan for 2016-19, which states: “We will encourage and support staff to contribute to, and deliver in, the breadth of activity across the School including research, teaching, knowledge exchange, outreach and management roles.”

- (v) Timing of departmental meetings and social gatherings – 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.

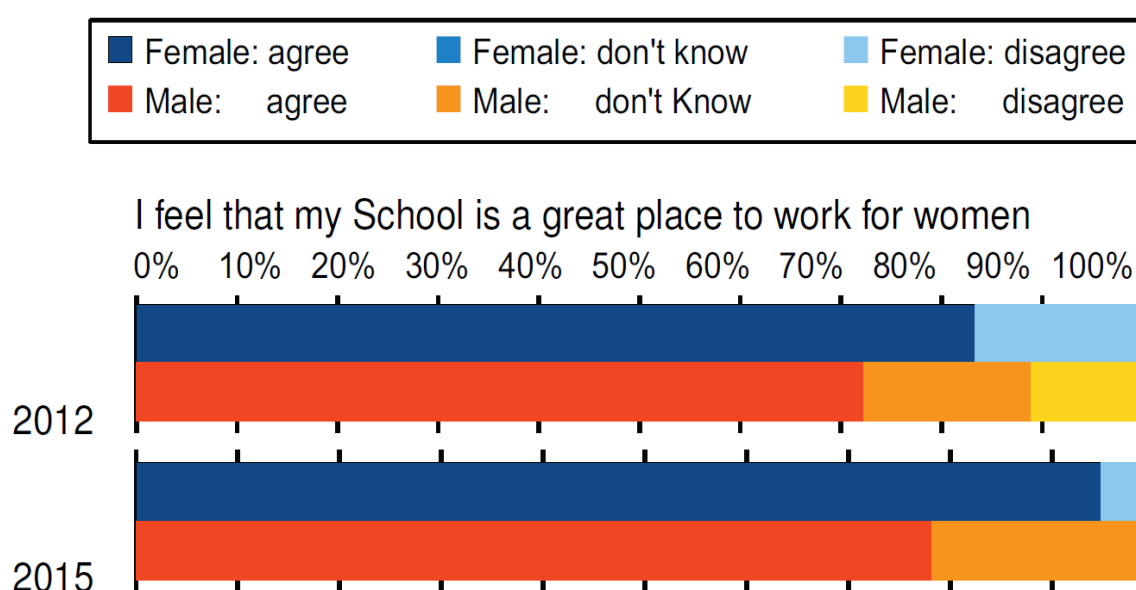
General School Meetings are held in core hours, usually late morning to accommodate part-time workers. The day of the week on which the meeting is held is varied, too. The time/date of many other meetings are decided through Doodle Poll, which allows potential participants to indicate a variety of times / dates when they are available.

The School Jamboree, institute staff/student socials, Christmas lunches and parties are usually held in the daytime/ at lunchtime. Fridays are avoided where possible, as Edinburgh schools finish on Friday lunchtime.

- (vi) Culture –demonstrate how the department is female-friendly and inclusive and ensures visibility of women, for example external speakers. ‘Culture’ refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff (academic, technical and support) and students.

When asked in our 2015 culture if academic and research staff agreed or disagreed with a variety of statements which reflected the female-friendly ethos of the School, the feedback was overwhelmingly positive.

Figure XX: Staff culture survey responses on whether Informatics is a great place for women to work (2012 and 2015)



Most female staff agreed that work within Informatics is allocated on a clear and fair basis, irrespective of gender, that meetings are completed in core hours to enable those with caring responsibilities to attend, that the School provides staff with useful mentoring opportunities (both as mentor or mentee) and offers the same career development opportunities to staff working part-time /flexibly and full-time.

In responding to the 2015 survey, 100% of male staff understood why positive action may be required to promote gender equality. They agreed that line managers are supportive of requests for flexible working (eg. requests for part-time working, job share, compressed hours) and are confident line managers would deal effectively with any complaints about harassment, bullying or offensive behaviour.

Compared to 2012: more female staff agreed that networking opportunities are provided within the School, and that the range of career development opportunities has increased. Moreover, female staff are more encouraged to take up career development opportunities and find the annual appraisal helpful. The proportion of women who have experienced a situation where they have felt uncomfortable because of their gender has decreased by 10%. In general 80% of female academic and research staff felt that this situation had never happened to them here.

All male staff (100%) agreed that work related social activities in the School are welcoming to both women and men. They also understood to a greater extent in 2015 than in 2012, why it is important to engage with gender equality and that the School has clear policies in relation to gender equality (eg. on discrimination, parental leave, carer's leave, flexible working).

Although there was much to celebrate in the quantitative feedback, in qualitative feedback some individuals expressed the view that 'Official procedures for staff-development, promotions, etc all very gender neutral and positive; colloquial environment not gender neutral' and 'I sense a systemic bias within the school, where a woman's contribution to a meeting is ignored but when the point is repeated by a male colleague it is not ignored.'

In addition, while most experience the positive side of flexible working, there was some suggestion of uncertainty or less flexibility for fixed-term contract staff, eg. 'The question about work life balance is tricky because many of us are working on contracts. You can have a nice work life balance but it's not clear that you'll have a job in 2 years if you don't put in more hours. This is not specific to the school, but more contract based research work.'

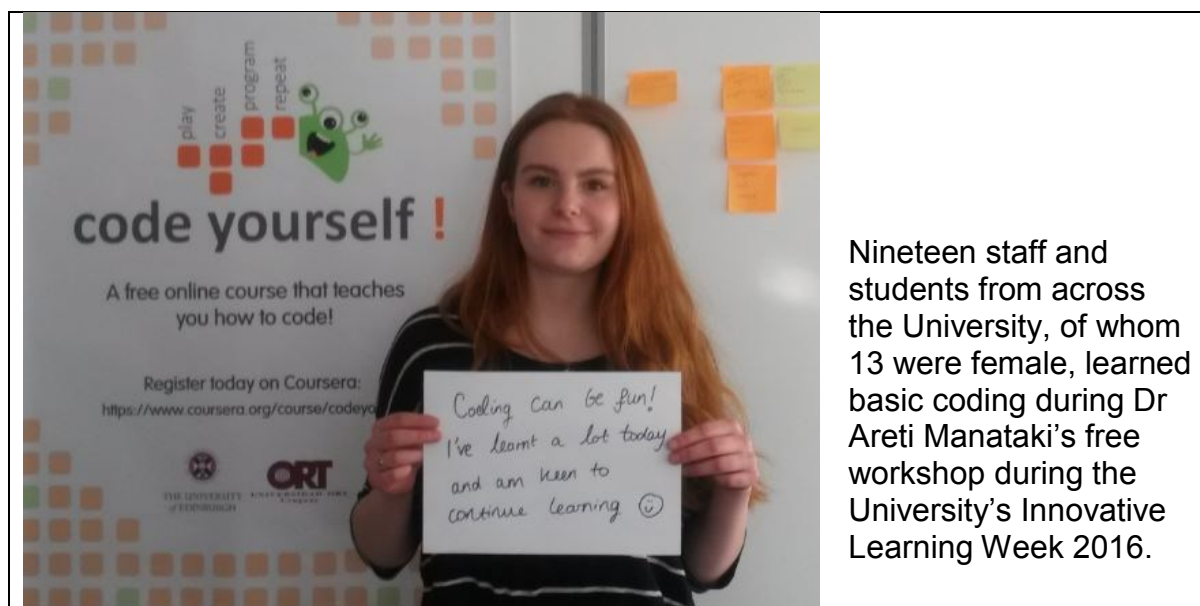
These issues were discussed during the staff/student data brainstorming workshop which helped to inform our Action Plan.

"Throughout my illness and time off, I could not have been better supported. I was taken off various admin and teaching duties whilst awaiting surgery. Then once I was well enough to return to work I was given a lighter load." (Staff feedback outwith culture survey)

- (vii) **Outreach activities – level of participation by female and male staff in outreach activities with schools and colleges and other centres, and how the department ensures that this is recognised and rewarded (e.g. in appraisal and promotion).**

Each year since 2013 the Equality and Diversity Committee has supported two Careerwise summer interns to experience life as an Informatics researcher within the School, and in 2014 the Equality and Diversity Coordinator organised a week's work experience for two female pupils from Gracemount High School.

Fourteen staff (5 women, 9 men) and several PhD students are known to be involved in outreach. An outstanding example from among our female staff is Dr Areti Manataki (described below), with additional ad hoc activities by Dr Kira Mourão (STEM ambassador, .FIRST LEGO League, Careers events at Craigmount High and Mary Erskine Schools); Professor Helen Pain (Informatics organiser for the annual Sutton Trust Summer School; ongoing organiser of participatory design workshops with children to develop software for children with autism; speaker: University of the 3rd Age 2015); Professor Perdita Stevens (Scottish Mathematical Council's Primary Mathematical Challenge 2015); and Dr Kami Vaniea (Christmas Cybersecurity Lecture 2015). Two female PhD students deserve particular mention: Amy Guy, Secretary of Prewired, a regular programming club for young people under the age of 19 in Edinburgh and Tania Marques, who ran a session called 'How can robots communicate like humans?' at the Explorathon 2014 Marie Curie Researchers' Night.



Between 2014-16, our unofficial 'outreach champion' Dr Manataki has run:

- Game On!, an introductory programming workshop for children at the annual Edinburgh International Science Festival with student helpers Maria Astefanoaei, James Garforth, Yann Sweeney
- Code Yourself! an online introduction to programming, also available in Spanish, run with student helpers Sander Keemink, Maria Astefanoaei and Ludovica Luisa Vissat (over 120,000 participants worldwide so far)

- Blend it with the Code Yourself! workshop for Computer Science teachers at the Computing at School Scotland Conference 2015
- Coding.Demystified programming workshops for parents and other adults at Prewired2015
- Game maker's guide to software engineering, workshop at Sutton Trust Summer School 2015
- Programming course for INSPIRE workshop, July 2016

In addition, Dr Manataki was a participant in the Program your own computer game exhibition at Explorathon 2014, gave a talk, "My tech story so far" talk at Code First: Girls intensive weekend, 2014 and has been a judge at the First Lego League schools competition on robotics, 2014, 2015 and 2016.

Among our male colleagues, Professor Sethu Vijayakumar has just been awarded the University's Tam Dalyell Prize for Excellence in Engaging the Public with Science and on 10 April 2016, delivered the Tam Dalyell Lecture on robotics at the Edinburgh International Science Festival. This year he has also organised a public debate, *How Robotics will Shape our Lives*, in association with the British Science Association and took part in a Live Lesson as part of the launch of BBC micro:bit, an ambitious initiative to inspire every Year 7 or equivalent child across the UK to learn basic programming.

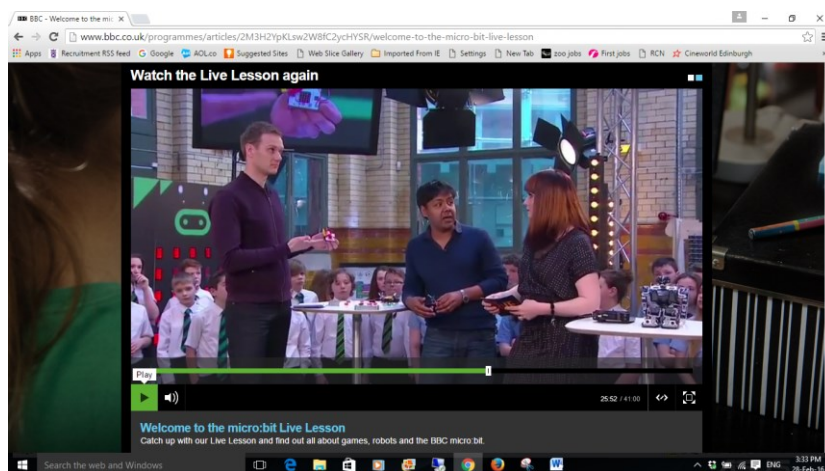
SAT team member Dr Michael Rovatsos is also active in outreach. He organised two public lectures as parts of ESSENCE Workshops and Summer Schools (2014 and 2015), gave a TEDx talk, *The Society of Computation and the Computation of Society*, which is available on YouTube (2014), hosted two local high-school pupils for a lab work day on 'Explaining Common-Sense Reasoning and Ontologies' and participated in 'Meet the Experts,' Explorathon Marie Curie Researchers Night, explaining 'Common-Sense Reasoning and Human-Level Artificial Intelligence' to children and adults at the National Museum of Scotland (2014). Another SAT team member, Dr Ram Ramamoorthy, helped to run the FIRST LEGO League.

Professor Alan Bundy is influential at national level. He is founder/project adviser for Royal Society of Edinburgh (RSE)/BCS Chartered Institute of IT project to develop materials for the teaching of computing that exemplify the Curriculum for Excellence. He is a key member of the Scottish Professional Learning And Networking for Computing (PLAN C) project and has represented BCS on the RSE-run Learned Societies' Group on Scottish Science Education, which advises on the teaching of all STEM subjects in Scottish Schools.

Other staff involved in outreach are Professor Mike Fourman (Edinburgh Fringe show 'The Internet: a dangerous idea?', Cabaret of Dangerous Ideas 2013); Dr Bjoern Franke (computer science careers events at Fettes College and Broughton High School 2015, 2016); Professor Ewan Klein (one of the founders of Prewired); Hugh Leather (Hack the

Burgh, 2015, launch of University of Edinburgh Programming Club 2016); Professor Dave Robertson (speaker, Edinburgh International Science Festival 2015).

Screenshot: Professor Vijayakumar (centre) gives a BBC micro:bit Live Lesson on robotics, February 2016



7. Flexibility and managing career breaks

(i) Maternity return rate

Five members of academic and research staff took maternity leave between 2011 and 2016. Three returned to work following their leave period. The School now has breastfeeding and nappy changing facilities (Action 4.3 in our 2013 submission).

Maternity policy is defined by the University. All pregnant employees have the right to 12 months Maternity Leave, irrespective of their length of service or hours worked. This is made up of 26 weeks of 'Ordinary Maternity Leave' and 26 weeks of 'Additional Maternity Leave.'

We lobbied the University to provide maternity-return coaching, and heard in March that our efforts had been successful.

"The Heads of Colleges have agreed that the maternity coaching scheme will be piloted in the College of Science & Engineering and we will be working out how the pilot will run in the next few weeks. It's thanks to your enthusiasm about the coaching that we've been able to get agreement to move forward with this."
University HR Services, 3 March 2016

(ii) Paternity, adoption and parental leave uptake

Paternity, adoption and parental leave policies are also determined by the University. We have had no cases of adoption leave or parental leave within the submission period. Nine male academic and research staff took paternity leave between 2011-2016 (three at grade UE07, two at grade UE08 and four at grade UE09).

(iii) Numbers of applications and success rates for flexible working by gender and grade

We have no cases of formal requests for flexible working within the period.

(iv) Flexible working –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 School has a culture in which flexible working is regarded as standard. It is easy for academic staff and researchers to organise their work around other obligations and responsibilities, and many do. Our teaching allocation, and particularly timetabling, is always handled flexibly in order to accommodate childcare responsibilities of staff (eg. on request avoiding afternoon lectures, or 9am lectures to allow for school/childcare drop-off and collection).

(v) Cover for maternity and adoption leave and support on return – 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.

When a member of staff says that they are expecting a baby, this information is passed to InfHR and then, with permission, to the line manager/Portfolio Management staff. The Head of HR then carries out and logs a maternity risk assessment. InfHR send the expectant mother a link to the University check list for maternity leave. Letters are then sent from College HR to the individual, with copies to their line manager/Portfolio Management so that everyone is aware of the expected date that maternity leave will commence. Cover is arranged by the line manager. Before the new mother returns, College HR contact her in advance of her expected return date to ensure that she is coming back and then do the necessary payroll changes. The line manager works with the returning mother to ensure that she is reintegrated into the work environment.

8. Any other comments – maximum 500 words

Please comment here on any other elements which are relevant to the application, e.g. other SET-specific initiatives of special interest implemented since the original application that have not been covered in the previous sections.

Professor Jane Hillston continues to promote women in science and technology and the benefits of participation in Athena Swan within and outwith the School. She is a member of the Women in Research Committee of the Computing Academy responsible for the annual Karen Sparck-Jones lecture and annual London Hoppers event for PhD students and early career researchers. Professor Hillston chairs the Women in Informatics Research and Education (WIRE) working group of Informatics Europe (2016 - 2017), which promotes gender awareness and good practice in academic departments through its website, a booklet entitled 'More Women in Informatics Research and Education' and new award, the Minerva Informatics Equality Award. As an ex-officio member of ACM-W Europe, Professor Hillston helps to organise an annual WomENCourage meeting for young female students and researchers across Europe, not least some of our own PhD students, who received financial support from the School to attend (Uppsala September 2015).

Since our last submission, Professor Hillston's activities have included:

- Co-organising a Strategy Meeting for Senior Women in Computing in Scotland, with the University of Stirling, which attracted about 30 attendees (July 2013)
- Organising University of Edinburgh Senate Discussion on Embedding Diversity (February 2014).
- Speaking about our positive experience of Athena Swan at a Women in Computing organised by the University of Dundee, attended by representatives of the Scottish academic community, Scottish Government and industry (March 2014)
- Participating in a meeting with Iain Carmichael MP, then Secretary of State for Scotland, to discuss representation of women within computer science, on his Ministerial visit to the School (August 2014)
- Speaking at the CignetS meeting, British Computer Society, London, which aimed to encourage more Computer Science Departments to apply for Athena SWAN awards.
- Speaking at a meeting in Dundee organised by SICSA Women's Committee on the practicalities of applying for Athena SWAN awards and possible activities which could be undertaken at Scottish level to increase female participation in undergraduate computer science degrees, as the narrow pipeline was identified as the critical problem by all departments (June 2015)

Professor Hillston was featured in the University of Edinburgh's Inspiring Women photography exhibition, launched as part of its International Women's Day celebrations in 2014.

She continues to support our student-run women in technology group, Edinburgh Hoppers. Professor Hillston was among the guest speakers at the Hoppers 10th Anniversary event, December 2015.

9. Action plan

10.

Provide a new 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.

Add to action plan ref training / conferences: There's the E&D budget or staff development budget. One of the actions that we perhaps should put on ourselves is to clarify the purpose of the staff development budget and how it is accessed.

11. Case study: impacting on individuals – maximum 1000 words **Ajitha Rajan and William Waites (both have agreed to write the case studies)**

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.

Ajitha Rajan is a member of the SAT team. She joined the School as a Chancellor's Fellow in November 2012 and was a case study in our previous Athena Swan application. In the last three years, she has found the School to be a continued source of support and encouragement. Ajitha says:

"I was assigned a mentor as soon as I arrived at the University. My mentor Jane Hillston has been a constant source of inspiration to me. She is kind, sensitive and has always made time for me in spite of being a sought-after, distinguished Professor. I am very grateful for all the positive encouragement I have received from her. She also pointed me to the right resources for professional development, research and teaching related information. I felt I could share both my personal and professional concerns with her."

In her first year, the School encouraged Ajitha to feel included in School culture by inviting her co-organise a social event, the Informatics Jamboree, alongside a senior colleague and senior student, to whom Ajitha could turn for advice.

"Co-organising a School wide-event helped me to get better acquainted with staff and students and vice-versa," says Ajitha. "This is not easily achieved with a School our size, and the Jamboree event played a crucial role in helping me to feel part of the community."

Ajitha applied for a research grant during her first year. Her peers helped by reviewing her proposal "and not just once – repeatedly!" In addition, the Head of School wrote a personalised letter that was both supportive and specific to Ajitha; all of which helped her secure the grant. Ajitha was also offered travel funds for conference trips and invited talks, to help advance her research visibility.

Periodically, the Head of School hosts lunches for new staff. Ajitha says,

"These lunches helped us get better acquainted, both with the Head of School herself and with each other. It also allowed us to voice any concerns we may have had as new academic staff. During one of these sessions, a few of us mentioned the lack of a teaching induction event for new staff which we believed would be valuable. Within a month of the lunch, all of us received emails about a teaching induction event. It was clear that what we had to say mattered, and it was heartening to see it reflected in action.

"The School has been extremely responsive and caring. During the last three months, I have had to apply for a UK visa extension both for myself and my family. On account of

NHS surcharge and fee hikes, visa fees have become very expensive, especially when it is for the whole family, which in my case includes my husband and two kids.

"When I presented this issue to the Head of School, I was immediately referred by the Director of Profession Services to an interest free loan that had recently been introduced by the University for visa fees. This has been immensely helpful. I am not sure what I would have done without it. School made the whole process hassle free and quick for me. I spent five minutes filling a form and within a week the loan was approved.

"I am grateful to the HR team in the School who have helped me on numerous occasions, from looking up visa information to producing letters within a day's notice. I have never once heard them complain that my request is last minute, which it usually is!

"The School and everyone in it has helped me in more ways than I thought possible, both professionally and personally. Working here has been a pleasure thanks to the friendly, supportive environment."

William Waites – STILL TO COME