

## School of Computing and Communications Athena Swan Action Plan

Priority actions are denoted by an asterisk at the start of each action title.

Objective 1: Significantly improve gender diversity of both staff and students through a research-led approach

\*Action 1.1 Introduce new opportunities for *undergraduate* students to pursue various *pathways* into Computer Science

### **Rationale:**

Research shows that Computer Science courses should offer diverse opportunities and curriculum to cater to students' interests, and data shows PGT Data Science recruits a better gender balance. Including choice and tailoring degrees to students' interests should also help with completion rates. Literature also shows women need diverse pathways into Computer Science: the Computing minor course exists (38% women in 2020/21), but students cannot currently continue their studies in Computing.

### **Key outputs/ milestones:**

- Module choices and new pathways established in curriculum review.
- New degree scheme(s) signed off by the University and advertised in prospectus (Oct-23).
- New initiative established for enabling minor students to continue Computing study (e.g., joint major degrees, first-year fee waiver for minor students to change to major, FutureLearn courses or additional CS modules rewarded as part of the Lancaster Award or their major degree).

### **Deadline:**

Oct-26

### **Persons Responsible:**

- UG Director of Studies
- PGT Director of Studies

### **Success Criteria:**

- Percentage of UG students who identify as a woman or an underrepresented gender rises to 20%, up from 12% in 2020/2021.
- Completion rates for all UG students rises to an ambitious 90%, up from 61% from female and 80% male from the 2018/19 graduating cohort.
- 100% of 1<sup>st</sup>/2:1 minor students able to continue Computing study as degree or through CS modules.

Action 1.2 Seek to establish an *undergraduate scholarship* programme for women and underrepresented gender groups to encourage CS degree applications

**Rationale:**

The number of women who have applied or joined our undergraduate degrees has not yet improved to our previous action plan target. Other universities (e.g., Durham, Bath) have offered undergraduate scholarships to encourage applicants from these underrepresented groups.

**Key outputs/ milestones:**

- Research carried out into what gender-based scholarships that other universities have offered.
- Budget determined for how many scholarships can be offered.
- Seek to offer at least 3 scholarships per year from Oct-23.

**Deadline:**

Oct-25

**Persons Responsible:**

- Athena Swan Lead
- Director of Recruitment
- Head of School

**Success Criteria:**

To improve the diversity of our UG cohorts, with the number of applicants who identify as women or an underrepresented gender rises to 20%, up from 15% in 2020/21.

Action 1.3 Cohesively apply Data Science MSc recruitment strategy to all *PGT recruitment* to increase applicants from women and underrepresented genders

**Rationale:**

The number of women on the Data Science MSc has risen to 29% in 2020/21, which is more than double that for women on the Cyber Security MSc (12%). Data Science MSc has introduced a strategy for widening participation (including offering different streams for PGT students to tailor their Data Science interests) and so all PGT schemes should learn from this strategy.

**Key outputs/ milestones:**

- Analyse take-up of different Data Science MSc streams by sex to uncover the most inclusive/ best practice (Apr-23).
- Share best practice of Data Science MSc with other MSc offerings.
- Introduce Cyber Security and Data Science UG major programmes for pipeline of opportunity.

**Deadline:**

Oct-25

**Persons Responsible:**

- PGT Course Convenors

- PGT Director of Studies
- Director of Recruitment

**Success Criteria:**

Percentage of PGT applicants identifying as a woman or in an underrepresented gender group rises to 30% for all PGT schemes, in line with MSc Data Science in 2020/2021.

\*Action 1.4 Research and establish a recruitment and retainment strategy for women and underrepresented genders in *academic and research* posts

**Rationale:**

Women are still underrepresented for SCC academic, teaching and research posts (21% combined). Research indicates that gendered language bias in job ads deters women and underrepresented gender groups from applying, and that it is important to emphasise collaborative teamwork and the application of Computing to real-world problems. Only 25% of chairs have also taken 'Recruiting the Best' training on interview panels; EDI training is important for ensuring no biases within selection processes. Research shows it is important to support underrepresented groups' sense of belonging in CS for retainment.

**Key outputs/ milestones:**

- Research conducted into understanding why women and underrepresented gender groups applied to SCC posts and what would support their belonging (Jul-23).
- Strategy established for recruitment (e.g., open academic posts, highlighting applicability of CS/ removing biased language in job ads, seeking EDI-feedback on job ads, sharing ads with potential women or underrepresented group applicants, ensuring EDI training for all recruitment panellists) and retainment (e.g., mentor schemes and sense of belonging).
- 100% of all new recruitment posts and panellists follow strategy.
- Rolling actions for Athena Swan introduced to support women & underrepresented groups' retainment.

**Deadline:**

Oct-26

**Persons Responsible:**

- Athena Swan Lead
- EDI Lead
- Head of School

**Success Criteria:**

Percentage of women and underrepresented genders in SCC research and academic positions rises and persists, specifically for women to 25% from 21% in 2020/21.

Action 1.5 Tailor a subset of *outreach* activities around girls and underrepresented genders in Computing

**Rationale:**

SCC has run outreach activities to encourage girls and underrepresented gender groups into Computing, but these need to be increased for increasing the pipeline to university.

Research in a Box initiatives for Computing have been developed for outreach activities but not yet widely shared or evaluated.

**Key outputs/ milestones:**

Regular outreach activities (e.g., events with local schools, Research in a Box initiatives, Cyber First Girls events) targeted at girls and underrepresented gender groups under 18 years old, communicated widely, to start 2022-23.

**Deadline:**

Oct-23; review annually

**Persons Responsible:**

Outreach Officers

**Success Criteria:**

At least 2 gender-related outreach activities per year with a minimum of 50 girls or individuals in underrepresented gender groups attending each event.

## Objective 2: Establish a strong foundation for sustained and intrinsic EDI support

\*Action 2.1 Establish an Equality, Diversity, and Inclusion (*EDI*) *committee* which is representative of the department and who drive EDI initiatives, feeding updates back to the department

### **Rationale:**

The Athena Swan SAT was formed by mostly junior members and women, raising burden for these groups who may struggle to enact change. The EDI committee will enable SCC to improve equality beyond gender (race, disability, LGBTQIA+) and create collective responsibility. Staff culture survey indicates only 15% agree that SCC rewards EDI initiatives, and many staff do not agree with the statement (31%) or do not know (36%). Staff culture survey also indicates more women than men strongly disagree that SCC is committed to EDI and AS.

### **Key outputs/ milestones:**

- EDI in workload for staff and members appointed based on role and gender (Oct-22).
- Committee guidelines introduced to ensure members promote an inclusive environment.
- Termly committee meetings established.
- EDI involvement rewarded in staff PDRs, promotions and progression processes.
- Research conducted on how students could be rewarded (e.g., via Lancaster Award, book tokens).
- SCC EDI annual review process introduced, including a report on Athena Swan action progress with each objective led by a different senior staff member.

### **Deadline:**

Oct-23; review annually

### **Persons Responsible:**

- EDI Lead
- Head of School

### **Success Criteria:**

- At least 1 member from each role (UG, PGT, PGR, research, PS, academic), and 30% women to better match SCC (down from 50% in 2022).
- At least 80% staff and students agree SCC is committed to promoting/ improving EDI, up from 46% for staff in 2021.
- At least 60% of staff and students in survey agree that EDI work is rewarded, up from 15% for staff in 2021

Action 2.2 Appoint *staff support* for Equality, Diversity, and Inclusion (EDI), Athena Swan, Wellbeing, and Outreach activities

### **Rationale:**

We are proposing an ambitious plan for culture change in the department regarding EDI and Athena Swan which includes Wellbeing and Outreach, all needing additional resources to implement activities and conduct data analysis for understanding progress towards actions. We will continue to push for additional departmental/faculty-based Professional Services AS support, although this budget is outside our control.

We will, however, use our discretionary budget for interns to support the annual rounds of staff/student culture surveys, focus groups and data analysis.

Budget for a 0.2FTE AS Research Lead will be allocated from internal funds.

**Key outputs/ milestones:**

- Additional Professional Services and/or intern support appointed to assist delivery of EDI/AS actions.
- 0.2FTE Athena Swan Research Lead appointed for research-led actions.
- Two Wellbeing Officers (one for staff, one for students) and two Outreach Officers established in academic workload allocation.
- Two-yearly student surveys (Oct-22, Oct-24) and staff surveys (Oct-23, Oct-25) to check impact – data analysis by Jan each year.

**Deadline:**

Jan-26

**Persons Responsible:**

Head of School

**Success Criteria:**

- At least 80% of staff and students agree: they know who to talk to about EDI (up from 61% in 2021) or Athena Swan issues (up from 64%), and SCC committed to promoting and improving EDI (up from 49%).
- At least 60% staff and students agree SCC supports wellbeing, up from 36% in 2021.

Action 2.3 Improve the sense of belonging felt by all diversities, ensuring they are included in SCC communications and can access information on EDI, wellbeing, and bullying and harassment

**Rationale:**

Staff culture survey indicates only 48% of respondents agree they feel included in SCC communications, and only 33% agree SCC informs them of gender equality matters (e.g., changes to parental leave policies). Some induction materials exist but should include EDI information, and should be tailored to all staff (research, academic, professional services, TAs) and students (particularly for TA pay grades/roles and PhDs – an issue raised by PhD reps and PRES). Qualitative staff survey data also indicates inductions have been poor or lacking a warm welcome; feedback is valuable to help reshape them. Staff culture survey also indicates that staff have witnessed (28%) or experienced (23%) bullying/harassment and only 31% know how to report it; sharing information on the institution's bullying strategy would help this. No analysis was carried out on gender differences in culture survey responses: this will be implemented for all future surveys.

**Key outputs/ milestones:**

- Create central repository for SCC data, such as SCC staff and student handbooks, with required access levels for staff and/or PG and UG students.
- Introduce processes of sharing data and events in the central repository.
- Induction materials produced for all staff and students and disseminated to all new starters, coinciding with a warm welcome on their first day.
- Introduce scc-edi mailing list for sharing updates and for staff and students to report EDI issues, and schedule regular 'Ask HoS' sessions and coffee meets.
- Advertise events on the central repository which celebrate different diversities.
- Ensure bullying and harassment guidance is shared on the repository.
- Two-yearly student surveys (Oct-22, Oct-24) and staff surveys (Oct-23, Oct-25) to check impact – data analysis by Jan each year.

**Deadline:**

Jan-26

**Persons Responsible:**

- Departmental Officer
- PGR Director of Studies
- Wellbeing Officers

**Success Criteria:**

- At least 80% staff and students agree that they feel included in SCC communications, including EDI (up from 49% in 2021).
- Less than 10% of staff and students witness or experience bullying and harassment (down from 28% and 23% respectively in 2021), and at least 80% know how to report it (up from 31% in 2021).
- No gender identity bias found within responses.

\*Action 2.4 Launch new research into EDI-related *experiences* of SCC members, particularly *students*

**Rationale:**

Our staff culture survey and the PRES survey for PGR have been key for understanding issues within SCC, but we have not yet included UG/ PGT students. Annual culture surveys should be conducted to continue to inform actions, including qualitative data. We propose surveying on alternate years, with PRES annually.

**Key outputs/ milestones:**

- Student culture survey and/or focus groups designed, meeting the Athena Swan Charter criteria. Continuing to schedule 'You said, We did' sessions for showing impact of student voice.
- Process initiated to disseminate staff and student culture surveys and/or focus groups every other year.

- Two-yearly student surveys (Oct-22, Oct-24) to check impact – data analysis by Jan-23, Jan-25

**Deadline:**

Jan-25

**Persons Responsible:**

- Athena Swan Research Lead
- Athena Swan Professional Services Lead
- Athena Swan Lead
- EDI Lead

**Success Criteria:**

- 60% of staff respond to culture survey (up from 45% in 2021) and 60% students respond in-line with staff percentage.
- Findings incorporated into rolling Athena Swan actions.

### Objective 3: Ensure a fair, inclusive learning and working culture

Action 3.1 Ensure academic and professional services staff *workload* is transparent and fair, regardless of gender identity

#### **Rationale:**

Staff culture survey indicates 64% of respondents agree that work is allocated on a fair basis irrespective of gender (App1-Table1). Staff culture survey indicates that only 50% respondents think the workload allocation for academic staff is transparent, and 45% think it is fair.

#### **Key outputs/ milestones:**

- Process established for logging gender statistics in staff workload.
- Process established for logging committee membership and involvement in events (e.g., Open Days) by gender.
- Aggregate statistics shared with staff.
- Two-yearly staff surveys (Oct-23, 25) to check impact – data analysis by Jan-24, Jan-26

#### **Deadline:**

Jul-24; review annually

#### **Persons Responsible:**

- Head of School
- Deputy Head of School
- Departmental Officer

#### **Success Criteria:**

- No evidence of gender bias.
- At least 80% staff agree: all genders are represented equally in workload and committee membership (up from 64% in 2021); and workload is fair (up from 45% in 2021) and transparent (up from 50% in 2021).

\*Action 3.2 Develop strategy to support *flexible and part time* working, career breaks and parental leave in SCC workload, PDRs, promotions, and progression

#### **Rationale:**

Staff culture survey indicates: only 40% respondents agree workload allocation considers career breaks and flexible and part time working; 55% research and academic staff respondents do not know if these aspects are considered in promotion processes, with 18% disagreeing that they are considered; and 29% of respondents do not know if their line manager is supportive of flexible working. Qualitative staff survey data indicates this is not consistent across roles (e.g., due to different funding bodies for research staff). Part-time percentages are also still small for PGR students, despite changes to PhD ads emphasising part-time; necessary support needs to be explored/enacted.

#### **Key outputs/ milestones:**

- Conduct interviews with PGR students and staff who have flexible or part time working patterns, have had a career break and/or parental leave to uncover their experiences and opportunities for support.
- Strategy implemented based on this research and signed off by Head of School.
- Two-yearly staff surveys (Oct-23, 25) to check impact – data analysis by Jan-24, Jan-26

**Deadline:**

Jan-26

**Persons Responsible:**

- Athena Swan Lead
- EDI Lead
- Head of School
- PGR Director of Studies

**Success Criteria:**

- At least 80% staff agree in culture survey SCC supports flexible/ part-time working, career breaks, or parental leave (up from 55% in 2021); at least 60% agree they are considered in promotion/ progression cases (up from 18% in 2021).
- At least 80% of staff think their line manager promotes flexible working (up from 29% in 2021).
- Increase part-time PGR students from 40% women to 50%.

\*Action 3.3 *Wider research* on EDI initiatives for students and staff identifying with an underrepresented gender and in another underrepresented group (e.g., race, LGBTQIA+, disability)

**Rationale:**

Athena Swan Charter principles indicate the importance of considering EDI issues affecting individuals with multiple underrepresented characteristics. Student and staff dashboards at Lancaster University do not enable us to explore these potential issues and initiatives so literature-based research should be conducted to investigate these. Depending on findings, option to supplement with participatory research, ensuring participants involved are rewarded for any participation in research (e.g., via monetary vouchers).

**Key outputs/ milestones:**

Primarily a research action (start Jul-23): literature explored for understanding how to support staff/ students in multiple underrepresented groups.

**Deadline:**

Jul-24

**Persons Responsible:**

Athena Swan Research Lead

**Success Criteria:**

Athena Swan actions established for any biases or issues uncovered.

Action 3.4 Investigate potential *biases* in SCC's *curriculum* which may negatively impact women and underrepresented groups.

**Rationale:**

Computing education research indicates that there are clear EDI biases in terms of language, topics, and imagery in Computing materials. This has not been investigated for SCC's UG and PGT curriculum. We have a new curriculum beginning in 2023 for first year, 2024 for second, and 2025 for third, offering a great opportunity to remove bias from course materials, and must ensure this review is on-going.

**Key outputs/ milestones:**

- Initial best practice on inclusive teaching incorporated in new curriculum.
- Additional research on identifying any other bias from SCC's curriculum (start Jul-24).
- Results shared and strategy introduced at courses review Jul-25.

**Deadline:**

Jul-25

**Persons Responsible:**

Athena Swan Research Lead

**Success Criteria:**

Curriculum updated based on the investigation carried out, and guidelines for new modules/content distributed

Action 3.5 Build on and improve *Women++@InfoLab* group events.

**Rationale:**

The Women++@InfoLab events have been running since 2019. Research and feedback show this is important for underrepresented groups. Engagement in recent events has not included any professional services staff. Events have also focused on SCC members rather than role models beyond SCC.

**Key outputs/ milestones:**

- Termly events, ensuring at least one event per year is targeted at professional services staff (e.g., career progression).
- External speakers with a range of roles in CS identifying as women or in an underrepresented gender group present at least one event per year.

**Deadline:**

Jul-23; review annually

**Persons Responsible:**

Athena Swan Lead

**Success Criteria:**

At least 3 activities per year that target full range of staff and students.

**Objective 4: Formalise tailored professional development and support to ensure all staff and students can achieve their potential**

**Action 4.1 Formalise and improve the effectiveness of *mentorship* for staff and students through new tailored mentorship schemes**

**Rationale:**

Research shows mentors are important for women and underrepresented gender groups to continue in Computing careers, and wellbeing survey shows importance of mentorship for wellbeing. The Academic Advisee system offers mentorship for UG/PGT with request for men or women mentors as role models but needs better take-up and support beyond a binary view on gender and for other underrepresented groups. The PGR panel process shows the importance of PGR students being able to speak to non-supervisor(s) about their career. Mentorship occurs for SCC staff but it is not a formal process meaning some people may miss out on having a mentor, and multiple mentors may be useful for different aspects of roles (e.g. teaching and research) – both points risen in qualitative staff survey data. Mentorship schemes also need to be considered formally in workload allocation to avoid gender bias.

**Key outputs/ milestones:**

- Building on O3.3 (Jul-24), strategy developed for improving effectiveness of Academic Advisee system (e.g., pairing of students to potential role models beyond binary genders and for other underrepresented groups).
- Mentorship scheme formally established for all PGR students and staff, recognising individuals may need multiple mentors.
- Mentorship included as part of workload allocation.
- Mentorship to include checking in with staff/ student sense of belonging.
- Data for all mentors is monitored by gender.
- Run sessions inviting role models identifying as women or in underrepresented groups to show their career pathway and provide advice for academic leadership.
- Two-yearly student surveys (Oct-24, Oct-26) and staff surveys (Oct-25, Oct-27) to check impact – data analysis by Jan each year

**Deadline:**

Jan-25; review annually

**Persons Responsible:**

- UG Director of Studies
- PGT Director of Studies
- PGR Director of Studies
- Head of School
- Wellbeing Officers

**Success Criteria:**

- At least 80% of UG and PGT students report they are happy with the Academic Advisee process.

- No evidence of overloading advisors identifying as a woman or in an underrepresented gender group (data from workload allocation).
- 100% of staff and PGR students are allocated a mentor.

\*Action 4.2 Instigate new research into how to improve student *completion* rates for UG and ensure supportive *progress* monitoring arrangements for PGR (being introduced in July 2022)

**Rationale:**

Completion rates for UG women appeared, on the surface, to have dropped for our last year of data, although analysis of individual cases showed that many of these were still actually in the system, so this figure needs to continue to be tracked. The PRES and PGR focus groups identified frustration with the appraisal system in SCC regarding progress monitoring. Continue monitoring PGR withdrawal rates (previously high but now close to university average), e.g. introducing exit interviews. Currently no access to sex/gender breakdown of PGR data.

**Key outputs/ milestones:**

- Case by case investigations conducted to better understand UG non-completion rates.
- Strategy established from these findings by summer-23, annually reviewed.
- Revision of PGR processes to improve clarity, quality and efficiency of progress monitoring; data available by sex/gender; and initiatives undertaken to better understand reasons for withdrawals as we continue to monitor them.

**Deadline:**

Jul-26

**Persons Responsible:**

- UG Director of Studies
- PGR Director of Studies

**Success Criteria:**

- Completion rates for all UG students rises to an ambitious 90% by Oct-26, to match PGT in 2021 and up from 61% for female and 80% for male UG in 2021.
- Improved progress monitoring for PGR (to be introduced July 2022).
- PGR data available by sex/gender, and withdrawal rates continue in-line with the university average.

Action 4.3 Establish a research *internship* programme for women and underrepresented gender groups

**Rationale:**

Research indicates the importance of improving the sense of belonging, professional development, and retainment of women and underrepresented groups in Computer Science. Research internships offer an opportunity to develop research skills, identify

individual strengths and interests, and start to plan for future PG studies or careers. Contacts and networks will be established, and the internship offers an encouraging environment in which to grow confidence, resilience and sense of belonging.

**Key outputs/ milestones:**

- Budget established for 1-2 summer internships for UG undergraduates identifying as women or an in an underrepresented gender group.
- Process established for advertising internship opportunities by Apr each year.

**Deadline:**

Apr-23; reviewed annually

**Persons Responsible:**

- Head of School
- Athena Swan Lead
- EDI Lead

**Success Criteria:**

At least 5 research internships offered in the next 5 years.

*\*Action 4.4 Ensure all staff regardless of gender and role are encouraged to apply for promotion or career change*

**Rationale:**

Staff culture survey shows that we need to improve our SCC processes for all staff regarding encouragement for promotions/ career change: 18% research staff, 40% professional services staff and 43% academic staff believe staff of all genders are encouraged to apply for promotion/ regrading/ career change; 36% research staff disagree with the statement (App1-Table7-9) and are aware of SCC promotion processes, with only 18% believing the full range of skills/ experiences of a research staff member are valued in promotions. Staff dashboard data for promotions (App2-Fig25 – grades 7 and above) also shows a very low percentage of women or no women or applying for promotion or career change 2016/17-2020/21.

**Key outputs/ milestones:**

- Conduct short interviews/ surveys with women staff to understand the barriers to applying for promotion/ career change.
- Ensure PDR process includes discussion of promotion or career change for all staff roles.
- Introduce strategy which encourages all existing staff, regardless of gender, to apply for promotion or career change.
- Monitor promotion/ progression statistics by gender and make this transparent to staff.
- Two-yearly staff surveys (Oct-23, 25) to check impact – data analysis by Jan-24, Jan-26

**Deadline:**

Jan-26

**Persons Responsible:**

- Head of School
- Athena Swan Lead

**Success Criteria:**

- At least 80% of staff agree that staff are actively encouraged to apply for promotion/ career change regardless of gender identity (up from 18-43% in 2021 for various roles), with 60% of research staff agreeing that they are aware of promotions processes and that promotions consider a full range of skills (up from 18% in 2021).
- Numbers of applications for promotion/ career change, and numbers of successful applications, reflects gender percentages in SCC.

Action 4.5 Introduce criteria into *PDRs* that consider impacts from the Covid-19 pandemic

**Rationale:**

Staff culture survey shows only 13% respondents agree that Covid-19 pandemic impacts will be considered in promotions and PDRs, 49% do not think Covid-19 will affect all genders equally, and research from industry shows women have been more affected than men by the pandemic. SCC has control over PDRs but not promotions and progression processes regarding Covid-19. Review good practice from the LU promotions Covid-19 statement and adapt/apply to SCC PDRs.

**Key outputs/ milestones:**

- Covid-19 impacts on reduced work output and success considered in SCC PDRs.
- Discussions with Athena Swan Institutional Group Jan-23 to ensure good practice re: Covid-19 is adapted/applied to SCC PDRs (based on LU promotions processes).
- Next staff survey (Oct-23) to check impact – data analysis by Jan-24

**Deadline:**

Apr-24

**Persons Responsible:**

- Head of School
- Athena Swan Lead

**Success Criteria:**

At least 50% of staff agree in culture survey agree that impacts from the Covid-19 pandemic have been considered in PDRs (up from 13% in 2021), and that this response is not biased based on gender.