# SAGE Cygnet Award Application

Supporting career pathways to academia for women in Engineering and IT





# **SAGE Cygnet Award Application**

| Name of Institution     | University of Technology Sydney                        |
|-------------------------|--|
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#### **University of Technology Sydney: SAGE CYGNET 2**

|                   | Current<br>Cygnet | Barrier   |
|-------------------|-------------------|---|
| Sub-group barrier | <b>✓</b>          | Higher Degree by Research (HDR) women candidates in the Faculty of Engineering and Information Technology are not attracted to, or progressing into, academic roles |



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UTS acknowledges and appreciates the work undertaken and assistance provided by Women in Engineering and IT staff, especially WiEIT Director and Deputy Director at the time Assoc. Prof. Eva Cheng and Lucia Bautista and the WiEIT Postgraduate Student Engagement team.



# **Abbreviations**

| Abbreviation       | Description   |
|--------------------|---|
| AIATSIS            | Australian Institute for Aboriginal and Torres Strait Islander Studies  |
| Ambassador program | Gender Equity Ambassador Program  |
| ECA                | Early career academic defined as Level A and B staff  |
| DISR               | Australian Government Department of Industry, Science and Resources   |
| EIT                | Engineering and Information Technology  |
| FEIT               | Faculty of Engineering and Information Technology   |
| GRS                | Graduate Research School  |
| HDRs               | Higher Degree by Research (i.e. Research Masters and PhD) students  |
| Indigenous         | Australian Aboriginal and Torres Strait Islander  |
| PVC                | Pro Vice Chancellor   |
| REACH              | Research Equity & Access Career Help Grants Scheme  |
| REI                | Research Equity Initiative  |
| RSSS               | Research Student Satisfaction Survey  |
| STEMM Faculties    | Includes the Faculty of Engineering and Information and Technology, Faculty of Health (includes the Graduate School of Health) and the Faculty of Science |
| UTS                | University of Technology Sydney   |
| WiEIT              | Women in Engineering and Information Technology   |
| WiSR               | Women in STEM Research  |



## 1 KEY BARRIER

# Unblocking the pipeline for prospective women academics in Engineering and IT

Engineering and IT (EIT) professions are dominated by men. The DISR 2023 STEM Equity Monitor indicates women account for 19% of the workforce in university EIT-qualified occupations and 20% of the EIT teaching and research workforce.

At UTS in 2019 (Figure 1), while there were 2.6-times as many men HDRs as women HDRs in FEIT, proportionally, more women were enrolling and completing and fewer were withdrawing from HDR programs compared to men (Table 1).

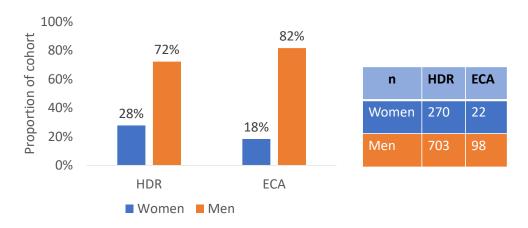


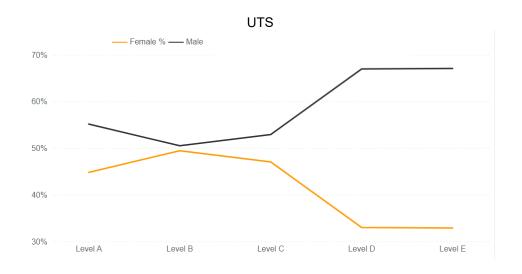
Figure 1 HDRs and ECAs (continuing and fixed-term) in FEIT in 2019

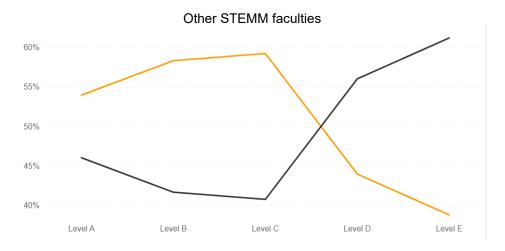
Table 1 FEIT HDR enrolments, completions, and withdrawals in 2019

| FEIT HDRs                       | Women | Men |
|---------------------------------|-------|-----|
| Annual growth                   | 11%   | 8%  |
| Completions per number enrolled | 14%   | 12% |
| Withdrawals per number enrolled | 3%    | 5%  |

This is not reflected in academic roles and FEIT had the lowest proportion of women early career academics (ECAs) of UTS faculties (Figure 2).

This Cygnet seeks to understand the barriers to women/nonbinary HDRs choosing an academic career and to develop strategies to support EIT career pathways. This is part of UTS's longer-term aim to support students and staff and close the gender gap in FEIT.





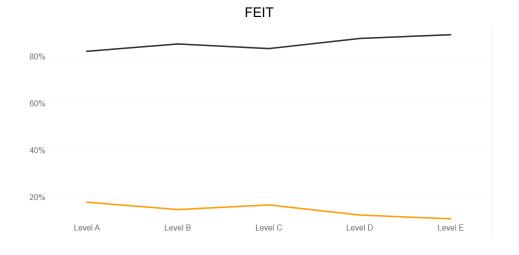


Figure 2 Proportion of academics at UTS (top panel), Faculties of Science and Health (middle panel) and FEIT (lower panel) in 2018.



## 2 EVIDENCE OF BARRIER

To understand the barriers facing women considering an academic career, we surveyed FEIT HDR graduates from the three graduating cohorts 2106-2109 (Table 2). The survey found fewer women had aspired to (59% women; 71% of men) or understood (67% women vs 80% men) requirements for an academic career. Reasons given by respondents focused around better salary and developmental opportunities in industry, and perceptions of an undesirable academic culture. The comments around an undesirable culture were not related to bullying and harassment. In a separate anonymous survey on HDR experience, the majority of FEIT HDRs (>92%, n=287) reported they had never experienced intimidating behaviours, threats of violence or unethical behaviour.

FEIT HDR graduates' comments on why they do not pursue an academic career:

Competitiveness of securing a permanent role, may have to move for work, somewhat of an isolating career

Lack of support and academic politics

Toxic culture in regards of required constant publications in highly ranked ... Slow paced environments.

Potential for growth

Money, life style

Noting experiences during HDR candidature (Table 3), compared to men, fewer women felt **connected to peers** in their school and had **supervisor support for writing publications**. The majority of those currently in an academic role agreed that their supervisor supported writing publications, however, fewer women had been able to publish (56% women vs 69% men).

In relation to the **role of supervisors**, more men had regular career conversations, discussed requirements for and were supported to seek an academic role. Another gendered difference was related to developing collaborative networks; more men agreed that their supervisor supported opportunities for being included in a grant-writing team and that there were systems in place to support this (Table 3).

Table 2 Demographics of Post-HDR Conferral survey

| Total surveyed        | 414 (9% response rate)  |
|-----------------------|---|
| Graduation year       | 2016-2019   |
| Response rate         | 19.6%   |
| Gender of respondents | Women 25%; Men 61%; Undisclosed 14%  No respondents identified as nonbinary, intersex, transgender or other  During this period, on average, 27% HDRs in FEIT were female |



Table 3 Proportion of respondents (degree conferral 2016-2019) agreeing with statements related to their HDR experience in the Post-HDR Conferral survey\*

| Statement   | Women agreeing (%) | Men agreeing (%) |
|---|--------------------|------------------|
| Feel connected to peers   | 33                 | 45               |
| Had regular career conversations with supervisor                                    | 33                 | 45               |
| Supervisor advised requirements for an academic role                                | 0                  | 27               |
| Supervisor encouraged and supported seeking academic role                           | 22                 | 27               |
| Had a respectful relationship with their supervisor                                 | 44                 | 59               |
| Supervisor support for writing publications   | 33                 | 59               |
| Supervisor support and systems<br>in place for inclusion in a grant<br>writing team | 22                 | 32               |
| Opportunities to build collaborative networks                                       | 33                 | 50               |

Women 9; Men 22

In consultation with representatives from FEIT, WiEIT and Office of PVC (Indigenous Leadership & Engagement) we developed a logic framework to prioritise and evaluate strategies to address this barrier. While our focus is on HDRs and academic careers, the demarcation is often blurred as we wanted to minimise barriers within an already small community. We have not excluded undergraduates and ECAs from strategic initiatives to retain women in EIT careers.

<sup>\*</sup>while gender proportions are similar to the HDR cohort during this period, the number of respondents per category are low, especially for women



## 3 ACTIVITIES AND OUTPUTS

Based on our improved understanding of barriers from the survey, Cygnet activities centred on:

- supporting women HDRs (Section 3.1) to provide
  - o connection with peers (3.1.1)
  - o a better understanding of academic career pathways (3.1.2)
- supporting HDR supervisors (Section 3.2) to develop capabilities including
  - o an understanding of diverse student experiences
- improving institutional support (Section 3.3) through facilitating
  - o an inclusive culture
  - o HDR transition to academic roles

#### 3.1 Student focus

#### 3.1.1 Peer networks and community

WiEIT, a FEIT program, delivers school outreach programs and support students so that study and career journeys in EIT are not limited by gender. They support both undergraduate and HDR students. Two programs target women/nonbinary HDRs:

- Gender Equity Ambassador Program to develop leadership skills, open to both undergraduates and HDRs and
- fortnightly informal Let's Talk sessions provide a community of support for HDR women to discuss and share ideas in a safe environment.

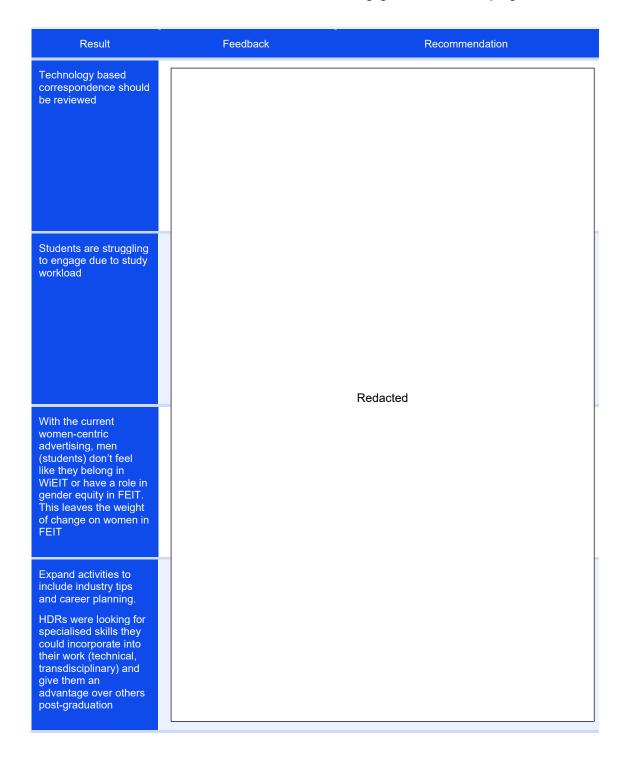
COVID restrictions prompted a review of WiEIT HDR programs to better increase engagement in an online or hybrid model (Table 4). Subsequently programs were modified to reflect HDR needs (Table 5).

Table 4 2020 WiEIT program feedback

| Assessment                     | Mode of engagement | Number of respondents | Response<br>rate |
|--------------------------------|--------------------|-----------------------|------------------|
| FEIT HDR survey                | On-line            |                       |                  |
| ECA (Level A and B) survey     | On-line            | Redac                 | eted             |
| Ambassador focus group         | In person          |                       |                  |
| Let's Talk meeting observation | In person          |                       |                  |



Table 5 Results and recommendations from evaluation of engagement with WiEIT programs



Let's Talk sessions (started in 2021) continue to connect current and new women/nonbinary HDRs. In 2022, 20 sessions were hosted by Ambassadors on different topics including:

- Managing stress for a healthy research journey,
- Salary negotiation as a research graduate
- · How to support someone in distress



At a university level, the GRS provides <u>broader support for HDRs</u> to navigate candidature and to connect and build their UTS research community. In addition to Induction and Orientation Programs, GRS offers a continuing series of events/workshops throughout the year that are opt-in for HDRs including a session on managing supervisor relationships.

#### 3.1.2 Mentoring

The Ambassador Program, started in 2020, equips WiEIT HDRs and undergraduates with skills, knowledge, and confidence to be social change agents through workshops on facilitation of outreach activities, gender equity advocacy and awareness of unconscious bias and cultural diversity. Between 2021-2022 there were 61 Ambassadors who mainly participated in WiEIT school outreach (69%) and community engagement/development (26%).

To better understand support needs, Ambassadors led discussions to map challenges during progression of HDR candidature (Figure 3) which led to the development and launch of the Women in STEM Research (WiSR) Mentoring Program in 2021.

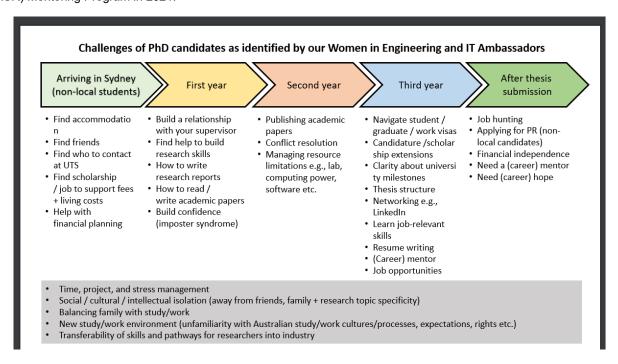


Figure 3 Challenges identified by women HDR during their candidature

The WiSR program guides HDRs in their transition from education to employment, creating awareness about academic and industry careers, builds career confidence and develops skills for personal and professional growth while building a network with academic leaders and industry professionals.

The program is driven by HDRs' personal goals; in 2020-21 mentees self-organised 20-hours of one-on-one sessions with their mentor and attended checkpoint sessions facilitated by WiEIT and an external facilitator (Table 6).



#### Table 6 WiSR program checkpoints

| Checkpoint               | Description  |
|--------------------------|--|
| 1: Goal-setting workshop | Equips students to acknowledge and own responsibility for mentoring relationship success and to look behind motivations for participating and how this can be anchored to an action plan |
| 2: Program Launch event  | Networking   |
| 3: Informal check-ins    | To enable sharing of experiences and identify potential challenges and opportunities   |
| 4: Mid-session check-in  | Networking   |
| 5: Graduation            | Reflection, celebration, and networking  |

In 2023, the program expanded by introducing additional content, workshops, and templates to support both mentees and mentors on their journey. A mentor bio book was created to provide assistance to mentors seeking help in specific areas for their mentees. For the mentees, three workshops (Time Management, Presentation and Negotiation) and a community lunch were organized to enhance their skills further. All participants also received a template book containing details of all events, guidance for conversations and goal setting and a mentoring contract template to acknowledge the commitment made by both parties. The goal of these enhancements was to provide a comprehensive and structured framework for the mentor-mentee relationship, ensuring that both parties have the necessary resources and support to achieve their goals.

In 2022, participants were from across all schools in FEIT (Figure 4); for most (84%) this was their first mentoring program. Mentors were mainly women (80%) and were from academia (55%) or industry (45%).

86 HDRs and 88 mentors have participated in the program to date (Table 7).



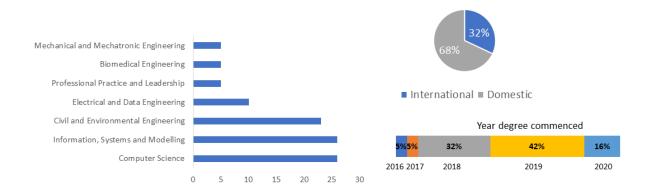


Figure 4 WiSR Mentoring Program (2022) participant characteristics

Table 7 WiSR program participants

| Year | Mentees | Mentors |
|------|---------|---------|
| 2021 | 20      | 20      |
| 2022 | 30      | 30      |
| 2023 | 36      | 38      |

## 3.2 Supervisor focus

Academics must complete the Graduate Research Supervision training module plus two additional supervisor development modules, every 3-years to register as an HDR supervisor. The new modules introduced post-COVID include guidance on <u>fostering a healthy and inclusive research culture</u>. Other modules introduce tools and practices that support a productive mentoring relationship, working with international students and mental health topics (Table 8). Resources to support student wellbeing and how to implement strategies of self-care are also provided.



GRS supervisor workshops were limited in 2020 due to the more pressing need to pivot HDR support online. Supervisor workshops re-launched in the second half of 2021. Initial uptake of the on-line module

Table 9 Non-mandatory GRS training topics to support HDR supervisors

| Mentoring relationship with HDRs  | International students               | Mental health                                  |
|-----------------------------------|--------------------------------------|--|
| Negotiating a mentoring agreement | Intercultural communication skills   | Warning signs of stress                        |
| Changing roles during candidature | Effective acculturation and learning | Common pitfalls in mental health conversations |

Table 8 Non-mandatory HDR supervisor training completions by FEIT staff compared to total UTS HDR supervisor training completions (2021-23)

| Training   | UTS completions | FEIT completions |
|--|-----------------|------------------|
| Working with graduate research students                          |                 |                  |
| Managing for success: supporting HDR mental health and wellbeing | Redacted        |                  |
| Supervising international research students                      |                 |                  |

was poor. Engagement improved following revision in June 2022. While these aren't specific to FEIT staff, nonmandatory supervisor-support training completions by FEIT staff is high compared to the rest of UTS (Table 9). FEIT staff comprise % of UTS academics eligible to supervise HDRs. Of staff who completed any of the GRS supervisor training sessions, \( \] % were FEIT staff in 2022 and \( \] % in 2023 (to June 2023) indicating the commitment of FEIT HDR supervisors to supporting students in their faculty. We speculate that this could be due to the faculty actively encouraging attending these training sessions with the overall aim of improving well-being support for HDRs. Academics are often time-poor and unlike students do not often opt-in to attend additional non-mandatory training which could reflect the low attendance overall.

Supporting supervisors to create an inclusive culture at UTS goes beyond the activities described here. Through our other Cygnet programs, we are working to create more awareness and provide tools for supervisors to support the diversity of experiences.

FEIT supervisors have also attended other non-mandatory training UTS provides to support an inclusive culture (Ability Awareness, Unconscious Bias, Cultural awareness, and Indigenous Cultural Awareness). However, we are unable to calculate completion rates. During data gathering it was discovered that data on non-mandatory training attendance is incomplete; e.g. if bespoke sessions are requested for a local unit it has not been recorded in central UTS systems. Acknowledging this information is important when evaluating the impact of training programs, short-term solutions are currently being implemented while UTS adopts a new data platform. This includes, encouraging trainers to enter records manually into the current database, and notices on the UTS Staff Learning portal asking participants to ensure their training records are up-to-date (FEIT2.1).

At UTS senior staff have been required to complete the Core Cultural Learning program developed by AIATSIS. Deans, Heads of Schools, Directors and Senior Managers were enrolled in this program designed to enhance cultural understanding, and build personal and professional Indigenous cultural capability. 68% of FEIT senior leaders enrolled in the AIATSIS Core program (n=37), have either completed or are currently completing it.



The Bronze Award Action Plan recommended that STEM staff should undertake training to improve awareness of gender diversity and disability. Regular *Breaking the Binary* and *Ally* training have been offered, with a brief COVID-related hiatus in 2020. UTS Allies complete both sessions and join a visible network of empathetic people who are allies of students and staff identifying as belonging to a sexual or gender minority. In FEIT, there are currently 20 Allies.

#### 3.3 Structural focus

#### 3.3.1 Inclusive culture

WiEIT's emphasis on creating an inclusive culture extends to celebrating events important to the community including National Reconciliation Week, International Women's Day, International World Pride, cultural celebrations (e.g. Nowruz, Eid-al-Fitr) and Trans Day of Visibility.

In 2022, the <u>Centre for Social Justice & Inclusion</u>, <u>Respect. Now. Always (RNA)</u>, and WiEIT held a monthlong event to showcase gender equity successes at UTS. At this event, several FEIT academic women were highlighted including a <u>Distinguished Professor</u>, <u>Head of School</u>, <u>Indigenous HDR</u> and <u>Indigenous undergraduate</u>.

#### 3.3.2 Funding to minimise career interruption

To emphasize commitment to a workplace culture that is supportive of women, FEIT designed targeted support to minimise parental leave-associated career disruption for women. This funding allows appointment of a suitably-qualified researcher (preferably also a woman or nonbinary individual) to continue research and engagement activities, providing a dual benefit to EIT women. Since 2019, 5 FEIT women academics have been supported by this scheme.

The UTS Research Equity Initiative (REI), has also provided additional support for re-establishment of research portfolios after carer-related career interruptions. The REI was offered in 2019-2020 and amended in 2021-2022 to reflect COVID-related impacts such as travel restrictions. It has subsequently been reviewed, taking into consideration HDR needs and in 2023 was relaunched as the Research Equity & Access Career Help (REACH) Grants Scheme, and expanded to include late stage HDRs.

Another career pressure-point for HDRs is the period between thesis submission and conferral. Often, supervisors provide short-term funding to employ HDRs to facilitate completion of thesis-related publications. To further nurture FEIT women/nonbinary and Indigenous HDRs and support academic career pathways, we designed a targeted Fellowship program. The Fellowship draws on the post-graduation HDR survey results and was co-designed with advice from WiEIT Ambassadors. It is intended to develop essential academic skills in research, teaching and service/engagement, and includes mentoring for professional growth and connections with Faculty leaders. It allows for variable fractional appointments to accommodate the needs of late-stage HDRs, without distracting from their focus on candidature completion. The Indigenous-targeted Fellowship integrates with an established Indigenous internship. Launching this Fellowship is incorporated into our future Action Plan (FEIT2.2).



## 4 OUTCOMES

In Section 2 we noted that a Key Barrier was the lack of support for critical academic pursuits such as research collaborations and publications compared to men HDRs (Table 3). As targeted outcomes, we sought to increase support for HDR women for these activities. The ultimate outcome we seek is to enable informed career decisions and to encourage FEIT women HDRs to choose an academic career pathway.

It is unlikely that all FEIT women HDRs will choose an academic career or that UTS can create academic roles for all of them. Many factors influence EIT graduate career pathways including competition with industry salaries and the limited availability of academic positions due to on-going university financial restrictions arising from the pandemic. With EIT industries also seeking to increase recruitment of women, academic roles need to not only be financially competitive but also provide better opportunities and career support for women. To this end, activities focused on empowering students and supervisors and providing institutional career support to mitigate obstacles particular to academic culture.

Results from surveying HDRs graduating in 2020-2022, show there was a positive change in most gendered differences identified in our post-conferral HDR survey in 2016-2019. HDR women's connection to peers increased (Section 3.1.1, Figure 5). HDR women's perception of supervisor support increased in relation to building collaborative networks, writing publications and grants (Section 3.2) Figure 5). This could, at least partly, be due the impact of GRS training modules providing supervisors better guidance for supporting women HDRs. Men's perception of supervisor support remained unchanged. We note that there is still room for improving FEIT HDR supervisor awareness and training on the importance of regular conversations around future careers for HDRs (FEIT2.3).

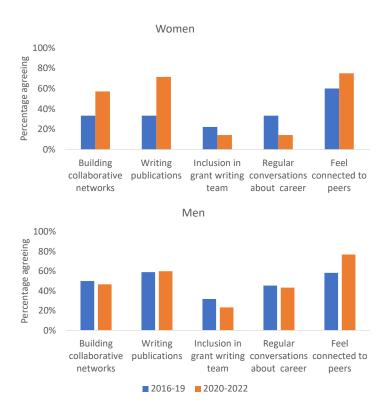


Figure 5 Changes in student perception of supervisor support during FEIT HDR candidature between 2016-2019 and 2020-2022 by gender from the Post-HDR Conferral survey

HDR student responses agreeing (somewhat agree and strongly agree) with statements related to supervisor support for various activities during their HDR candidature Number of women respondents in both time periods was <10 For men, n=30 for 2021-22 and 22 for 2017-18



To assess if there was a broader influence of our actions to support HDRs and supervisors, we analysed the rate of HDR completions by gender (Figure 6). The FEIT HDR completion rate for women remains relatively unchanged since 2019 but is currently slightly lower (1%) than for men despite the efforts described in this Cygnet.

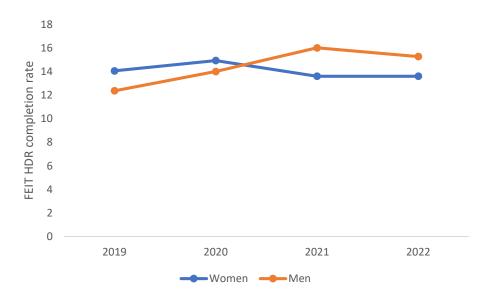


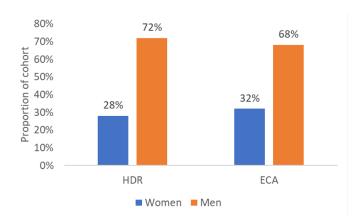
Figure 6 FEIT HDR completion rate by gender (completed students/enrolled students)

The number of HDR women completing per year are few and fluctuations in the rate are due to small changes in number per year

HDRs are given the opportunity to explain their reason for withdrawal but it is not compulsory. There were no gender differences in reasons for HDR candidature withdrawal with the most commonly cited being for personal reasons or undisclosed 'other' reasons. This requires further investigation in the future to understand how UTS may be able to better support FEIT HDR candidates.

In 2023 (Figure 7) while the number of women HDRs has increased, the proportion of women HDRs in FEIT has not changed since 2019 (Figure 1) indicating that the cohort of HDRs that could transition to academic roles is stable. FEIT has a target of 22% academic women overall which we have achieved for ECA. Level A women increased from 18% in 2018 to 35% in 2022 and Level B from 15% to 27% (Figure 8). We acknowledge that this is likely to be also influenced by UTS's broader STEM recruitment strategies, including in FEIT, through a range of inclusive recruitment practices as well as targeted recruitment. Taken together, these data suggest that there is potential for a robust HDR to ECA pathway at UTS. However, implementation of strategies to support the retention of HDRs as ECAs at UTS is an important next step.

While we have not been able to launch the Academic Development Fellowship program yet (Section 3.3) it forms part of our future Action Plan (FEIT2.2). This Fellowship will bridge the gap between thesis submission and degree conferral, providing an opportunity for women or Indigenous FEIT HDRs considering an academic career pathway to experience research, teaching and service activities that an academic undertakes.



| n     | HDR | ECA |
|-------|-----|-----|
| Women | 337 | 39  |
| Men   | 858 | 83  |

Figure 7 HDRs and ECAs (continuing and fixed-term) in FEIT in 2023

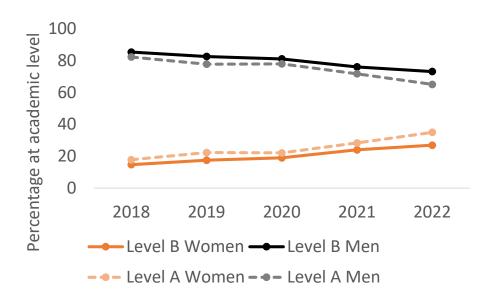


Figure 8 Proportion of women and men at Level A and B in FEIT



## 5 IMPACT

One reason HDRs noted for not aspiring to an academic career was their perception of an undesirable academic culture (Section 2). Experiences of an inclusive and supportive culture during their HDR candidature will make FEIT a more attractive workplace for HDRs seeking to choose an academic career pathway. We have made a positive change in HDR perceptions of their workplace and better prepared HDRs to choose a suitable career pathway.

### 5.1 HDR support

| Further evidence highlighting that our actions to empower FEIT HDRs and their supervisors have had an impact comes from RSSS data gathered by the GRS. FEIT HDRs (\_\%) perceived an improvement in supervisor support in 2022 compared to the previous year (Figure 9) (FEIT2.4) and few (\_\%) felt that it had declined. Overall at UTS, the proportion of HDRs agreeing that they were satisfied with research supervision support is high. It increased from \_\% in 2019 to \_\% in 2022 (UTS RSSS report). |
|---|
| Redacted  |
| Figure 9 FEIT Research Student Satisfaction Survey response in 2022 comparing Research Supervision Support to the previous year  NB: Data on gender is not available  Similarly, in 2022 \( \times \) of FEIT HDRs perceived either an improvement in their research culture and environment compared to the previous year and only a few (\( \sqrt{\times} \) %) felt that it had declined (Figure 10).  |
| Redacted  |

Figure 10 FEIT Research Student Satisfaction Survey response in 2022 comparing Research Culture and Environment to the previous year

This section captures belonging, integrity and availability of facilities

NB: Data on gender is not available



Changing cultural norms is not easy and can be a slow process. However, these measures indicate that the impact of our actions are supporting a positive change in creating a more inclusive research culture in FEIT and will continue to be monitored.

HDR women, in particular, had noted lack of support and connections with peers (Section 2). The positive impact of WiEIT actions to change this for undergraduate and HDR women through networking and mentoring opportunities is noted through participant responses (**FEIT2.5**). As one participant noted:

All the sessions, I have attended so far were really good. Especially, the last one on PhD blues, as I'm also going through the same, these days!

The participation from different attendees, was really thought-provoking and informative. There was an immediate sense of belonging too.

2<sup>nd</sup> year HDR Let's Talk session woman participant

Often those who participate in gender equity initiatives are challenged as to the need for or the impact of these programs. Those who participated in the Ambassador program felt they had appropriate skills and knowledge to influence the attitudes and behaviours of others in relation to gender equity in EIT:

It was a perfect experience, would not change a thing. It matched my expectations.

Ambassador 2021-2022

I feel quite confident to do so as I got the opportunity to influence existing attitudes and behaviours of others. There's more to learn, and it adds to my level of confidence knowing that I can learn from other Ambassadors and everyone who works and partners with us.

Ambassador 2021-2022

Nonetheless, in the 2022 survey Ambassadors also noted that being a champion for gender equity can be difficult:

I feel like I can advocate for other people but not for myself

Ambassador 2021-2022

I'm not sure how I can influence someone else's attitudes and behaviours in general

Ambassador 2021-2022



Survey responses from WiSR program participants emphasised that they were now better prepared for life after HDR candidature (Section 3.1.2); their confidence increased for all parameters assessed (Figure 11) including in developing professional networks, identifying their strengths and developing personal branding (FEIT2.2). Similarly, mentor's perception of mentee's confidence, self-awareness and awareness of career opportunities also increased.

This program has been very beneficial for me

2022 WiSR program HDR participant

Great initiative, I found it valuable and I hope you keep it going for future HDR students.

2022 WiSR program HDR participant

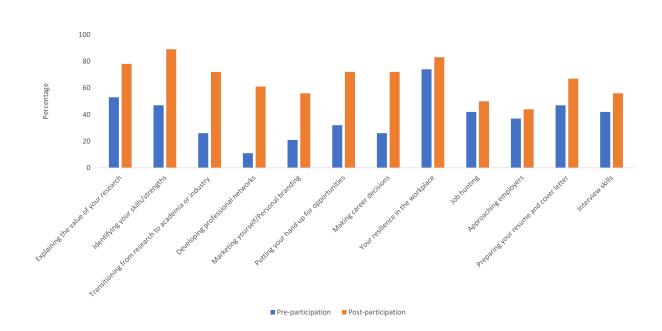


Figure 11 Change in confidence of WiSR HDR Mentoring Program participants

## 5.2 Institutional support systems

Traditional academic success is measured through factors such as success in obtaining research funding and publication of research outcomes. One of the HDR survey respondents noted the requirement for a high publication rate in their perception of a 'toxic culture' (Section 2). Career interruption due to parental leave comes at a critical point in their career for most academic women who wish to have children. Supporting academic women who wish to continue their research during parental leave was another FEIT strategy to support HDRs as well as other academics. Targeted research support for parental leave had a positive impact on FEIT women academics (FEIT2.6) with one participant noting:



The Parental leave support package was super helpful for me! My head of school ...helped me which was during COVID-19 and when I was new to UTS and had no funding to support my research

FEIT women academic supported by FEIT Research Support Scheme in 2020

Similarly, a researcher hired to provide parental leave research support said this provided her opportunities to develop laboratory and research-student supervision skills and write publications:

I had just finished my MPhil and this job lets me continue research and develop my own small project as well

Woman researcher employed through FEIT Research Support Scheme in 2023

While the intention was to prioritise women hired into the research support roles, of the 4 hires that have been finalised so far, only one was a woman. Matching skills to the project is clearly important but the original message on giving preference to women should be re-emphasised (**FEIT2.6**).

Training to promote awareness and support intersectionality of experiences (Section 3.2) in FEIT has also been impactful, especially for HDRs and undergraduates. Visibility as an LGBTQI+ Ally through displaying a distinctive lanyard or an email badge has been important (Table 10).

#### Table 10 Comments from FEIT staff who are UTS Allies

I've had students comment favourably about the Ally logo on my e-mail signature

...being so visible about it provides students and staff a sense of a safe and welcoming place even if they don't need to reach out very often.

One interaction I had recently was with someone who is both a student and a tutor, they are out as trans. We had a brief chat and they brought up how much they appreciate seeing me wearing my transflag-coloured lanyard that my staff ID hangs from. While people rarely reach out for support it is clear being visible has an impact.

Sometimes the actions may seem small, e.g. giving a brief mention of upcoming events at team meetings, but it is enough to keep the conversation alive. As a result, I am aware of academics at my school who have attended the Ally training.

I have also noticed a more considerate approach in conversations where my peers and academics have stopped to think how to best use inclusive language.

I am the Capstone supervisor of a trans-identifying student. They sought me out because they could see that I am an ally and therefore already have a strong sense of respectful language and can approach sensitive situations with care and compassion.

#### The importance of collective advocacy

Emaan's WiEIT journey started with the Gender Equity Ambassador Program, where she was able to actively contribute to gender diversity in STEM through the WiEIT School Outreach Program and keep developing her knowledge on leadership and inclusion via the range of workshops offered to Ambassadors. The experience and knowledge gained in this program were ey to secure a paid role as a WiEIT Student Promotional Representative of UTS (SPROUT). Emaan's favourite thing about the WiEIT community is how proactive it is and how included she feels. In her view, connections are fundamental and now we have so many different ways of creating community and sense of belonging – even with being part of a Microsoft Teams channel counts! From the School Holiday Outreach Workshops, where she was able to facilitate cyber security:



Example of positive impact of participating in Ambassador program

While we have seen some improvements as a result of the work undertaken as part of this Cygnet, a number of actions identified through this project to support HDRs to choose an academic career pathway are detailed below.



# 6 FURTHER ACTIONS

| Reference | Rationale/Evidence   | Actions & Outputs  | Timeframe<br>(start & end) | Person/Group responsible for implementing action | Senior Leader<br>accountable for<br>action delivery                | Desired Outcomes/Targets/Success<br>Indicators  |
|-----------|--|--|----------------------------|--|--|---|
|           | Incomplete records of training completion  | Develop workflow for manual input<br>of completions into UTS systems<br>Include training completions in new<br>HR system | 2023<br>2025               | CSJI Gender<br>Equity Team<br>People Unit        | Director, Equity, Diversity & Inclusion Executive Director, People | Increased training of FEIT staff assists in creating a culture of inclusion for women in the faculty  Records of non-mandatory training   |
| FEIT2.2   | Low numbers of women choose EIT careers in academia                              | Implementation of FEIT Academic<br>Development Fellowship<br>WiSR mentoring program                                      | 2026-<br>ongoing           | FEIT Executive                                   | FEIT Dean  | Improvement in HDR response in survey of FEIT HDRs to statement I have a better understanding of what is involved in an academic career   |
| FEIT2.3   | Gendered difference in occurrence of regular career conversations with HDRs      | GRS supervisor training module to emphasise importance of career conversations and guidance for supervisors              | 2024-2026                  | GRS  | GRS Dean   | More women HDRs report regular career conversations/guidance from their supervisors Improvement in women HDR response to statement My supervisor and I have regular conversations about my career                               |
| FEIT2.4   | Lack of understanding of<br>experience and<br>motivation of women<br>HDRs        | GRS to incorporate gender filter in Faculty reports  | 2025                       | GRS  | GRS Dean   | Faculty RSSS reports to include gender  |
| FEIT2.5   | Peer networks and<br>building leadership skills<br>support the HDR<br>experience | WiEIT networking sessions and<br>Ambassador Program  | 2024-2026                  | WiEIT  | WiEIT Director   | Women HDRs feel better connected to peers Women HDRs are provided opportunities to develop leadership skills Improvement in women HDR's response in survey of FEIT HDRs to the statement I feel connected to peers in my school |



