



University of  
Southern  
Queensland



# SAGE Cygnet Award Application: STEMM Pipeline

Institution: University of Southern Queensland

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## Glossary

Abbreviation	Term
<b>ADOSP</b>	Academic Development and Outside Studies Program
<b>AS</b>	Athena SWAN
<b>ARC</b>	Australian Research Council
<b>ASBA</b>	Athena SWAN Bronze Award
<b>BaU</b>	Business as usual
<b>CPO</b>	Chief People Officer
<b>DVC</b>	Deputy Vice-Chancellor
<b>DVC (AA)</b>	Deputy Vice-Chancellor (Academic Affairs)
<b>DVC (R&amp;I)</b>	Deputy Vice-Chancellor (Research and Innovation)
<b>EBA</b>	Enterprise Bargain Agreement
<b>ECR</b>	Early career researcher
<b>GRS</b>	Graduate Research School
<b>HDR</b>	Higher Degree by Research
<b>HER</b>	Higher Education and Research
<b>HR</b>	Human resources
<b>ICT</b>	Information and communication technology
<b>HoS</b>	Head of School
<b>KIT</b>	Keeping-in-touch
<b>LGBTIQA+</b>	Lesbian, gay, bisexual, transgender, intersex, queer, asexual and other sexually or gender diverse
<b>NHMRC</b>	National Health and Medical Research Council
<b>OoR</b>	Office of Research
<b>PP</b>	People Portfolio

<b>PPSS</b>	Planning and Performance Support Services
<b>RISE</b>	Research Information Solutions Ecosystem
<b>R&amp;I</b>	Research and Innovation
<b>SAGE</b>	Science in Australia Gender Equity
<b>SAT</b>	Self-Assessment Team
<b>STEMM</b>	Science, technology, engineering, mathematics and medicine
<b>TOIL</b>	Time off in lieu
<b>ToR</b>	Terms of Reference
<b>UniSQ</b>	University of Southern Queensland
<b>VCE</b>	Vice-Chancellor's Executive
<b>VC</b>	Vice-Chancellor
<b>WAM</b>	Workload Allocation Model
<b>WiS</b>	Women in STEMM
<b>WGEA</b>	Workplace Gender Equality Agency

## University of Southern Queensland: SAGE Cygnet #2

Barrier Type	Current Cygnet	Barrier
Institution-wide barrier		Onboarding
Sub-group barrier	✓	STEMM Pipeline
Institution-wide/Sub-group barrier		
Institution-wide/Sub-group barrier		

## Key barrier

The University of Southern Queensland (UniSQ) identified the STEMM pipeline as a key focus area due to clear evidence that women entered and progress in higher degree by research (HDR) STEMM studies (including doctoral studies) at the University at lower rates than men. Naturally, this has a flow-on effect to women then joining the University as postdoctoral academic employees to pursue research careers at lower rates than their male peers, and a further flow on effect to the pipeline of women progressing up through academia. UniSQ identified this barrier during the self-assessment undertaken to develop an Athena SWAN Bronze Award (ASBA) application (2017-2020) and further data gathered during the Bronze Award validity period (2021-2024).

For the purposes of this Cygnet Award, UniSQ has focused its attention on the section of the STEMM pipeline that comprises doctoral students and postdoctoral Level B academic employees. This focus has been on providing support to women in STEMM to complete their PhD studies and enter the workforce as research-focused postdoctoral academics in UniSQ's STEMM departments.

## Evidence of barrier

### STEMM doctoral (research) students

In 2018, UniSQ had 469 active HDR students in STEMM disciplines (37% female), with 395 (84%) of those students undertaking doctoral studies (33% female; Table 1; Chart 1). Ratios were similar over the remainder of the ASBA self-assessment period (Table 1; Chart 1). These figures highlight the HDR student pipeline as a significant challenge to equal gender representation in STEMM, with low female representation a contributing factor to low rates of women subsequently entering and progressing in academic STEMM careers.

	2018						2019						2020						Total HC	Total %
	F		M		X		F		M		X		F		M		X			
	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
<b>Doctorate (Research)</b>	130	33%	265	67%	0	0%	144	34%	280	66%	<6	<1%	158	37%	272	63%	<6	<1%	1251	85%
<b>Other HDR program</b>	43	58%	31	42%	0	0%	43	61%	27	39%	0	0%	41	56%	32	44%	0	0%	217	15%
<b>HDR Total</b>	173	37%	296	63%	0	0%	187	38%	307	62%	<6	<1%	199	39%	304	60%	<6	<1%	1468	100%

Table 1: Active STEMM HDR students 2018-2020.

Note: HC = Head count. % = % of active STEMM students at same degree level in same year.

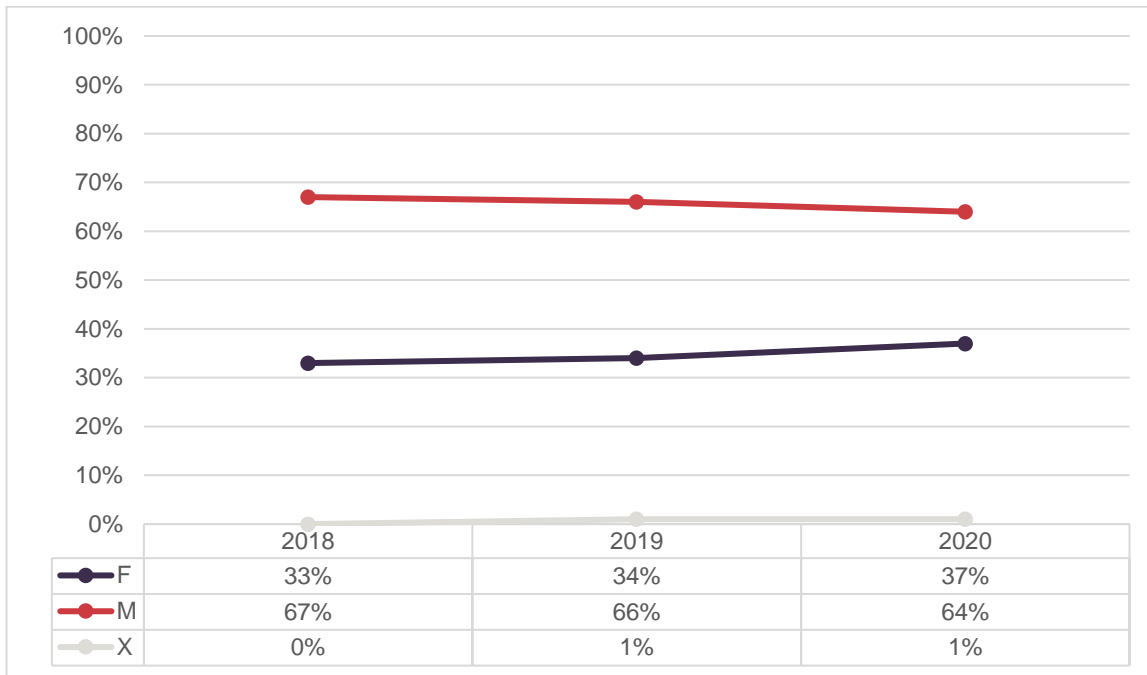


Chart 1: Active STEM doctoral (research) students 2018-2020.

Rates of HDR program completion 2018-2020 are comparable to active student ratios as expected, with women over this timeframe making up 35% of HDR program completions overall and 33% of doctoral program completions (Table 2; Chart 2). However, these ratios were less consistent year-on-year; women made up 43% of HDR program completions overall and 42% of doctoral program completions in 2018, compared to 29% and 28% respectively in 2019 and 35% and 32% respectively in 2020 (Table 2; Chart 2). The reasons for these fluctuations are unclear (and may be impacted by the COVID-19 pandemic and related caring responsibilities), but they do highlight the need for increased support for women in STEM to successfully progress through their studies.

	2018						2019						2020						Total HC	Total %
	F		M		X		F		M		X		F		M		X			
	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
<b>Doctorate (Research)</b>	18	42%	25	58%	0	0%	15	28%	39	72%	0	0%	17	32%	37	68%	0	0%	151	88%
<b>Other HDR program</b>	3	50%	3	50%	0	0%	3	33%	6	67%	0	0%	4	67%	2	33%	0	0%	21	12%
<b>HDR Total</b>	21	43%	28	57%	0	0%	18	29%	45	71%	0	0%	21	35%	39	65%	0	0%	172	100%

Table 2: STEM HDR program completions 2018-2020.

Note: HC = Head count. % = % of completions at same degree level in same year.

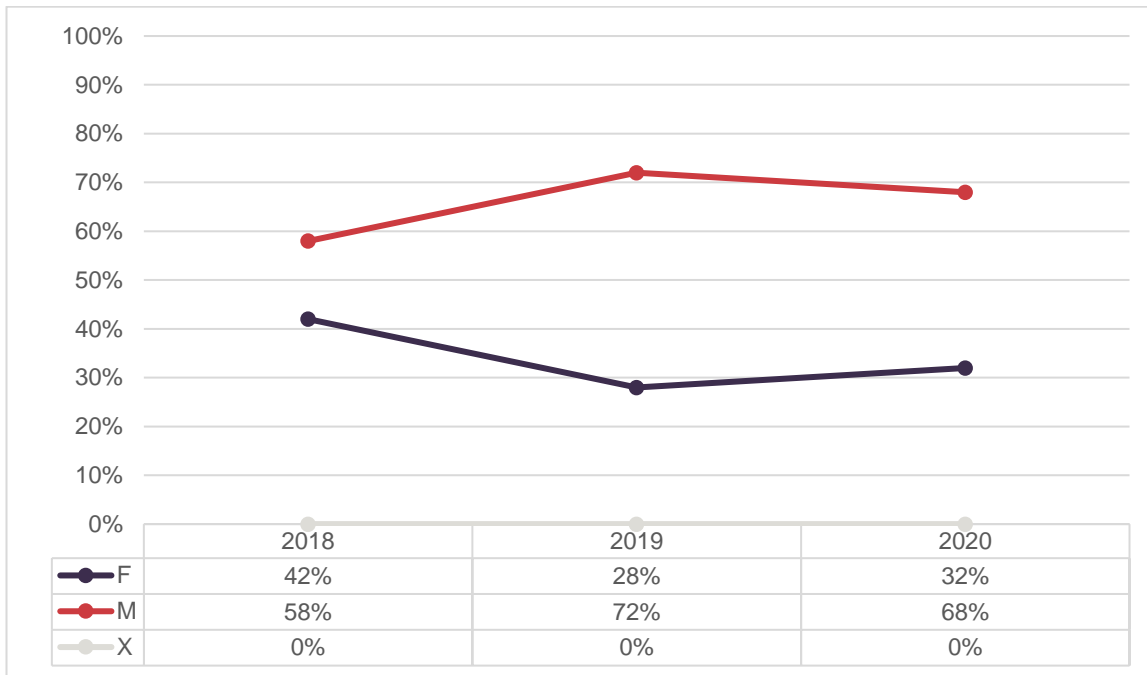


Chart 2: STEM doctoral (research) program completions 2018-2020.

### STEMM academic staff

Women were underrepresented among academic STEM staff 2018-2020, where they made up 41% of academic employees (Appendix 1). Comparatively, women represented 56% of the non-STEMM academic workforce over that same time period (Appendix 1). However, underrepresentation in STEM varies by career seniority; over 2018-2020, women outnumbered men at levels A and B, but were increasingly outnumbered as seniority rose over levels C, D, and E (though women were still within a 40:40:20 gender balance threshold with 42% at level C; Chart 3).

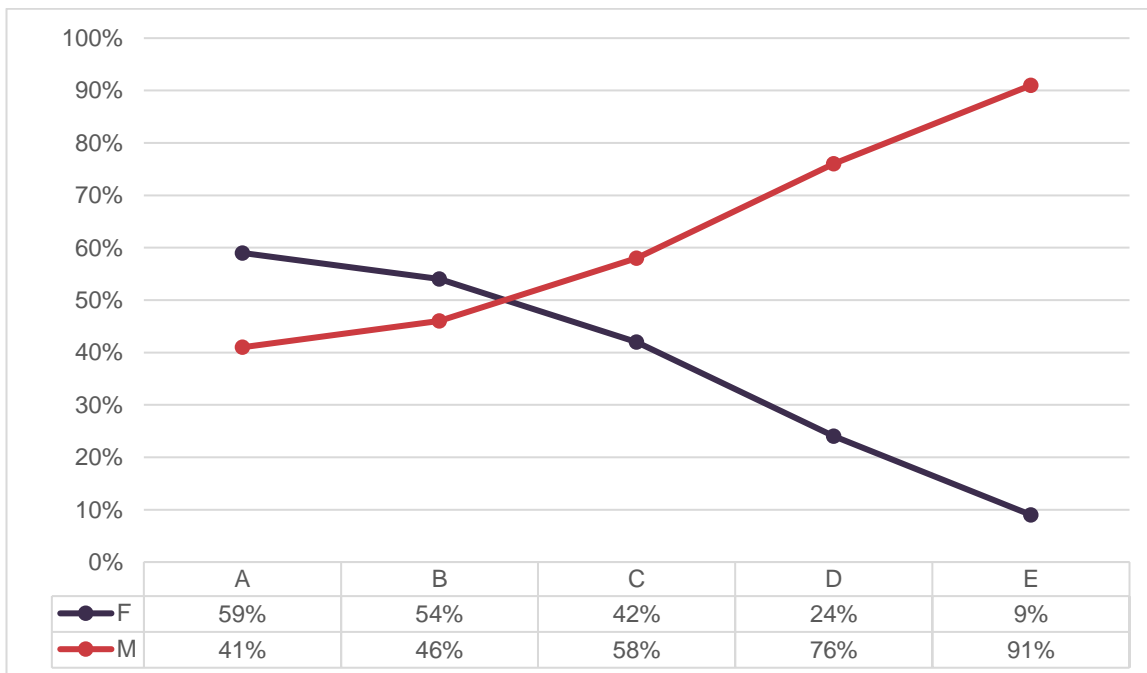


Chart 3: Gender ratio of academic STEM staff by level 2018-2020.



Over 2018-2020, trends differed for academic STEM staff depending on their specialisation:

- In the teaching specialisation, women tended to outnumber men at all levels (Appendix 2; Chart 4; though note there are small numbers in teaching).
- In teaching and research, women tended to outnumber men at Level A, be equal at Level B, and then decline in number through academic Levels C, D, and E (Appendix 2; Chart 5).
- In the research specialisation, women were outnumbered by men at every level, with the discrepancy highest at the upper levels (D and E; Appendix 2; Chart 6).

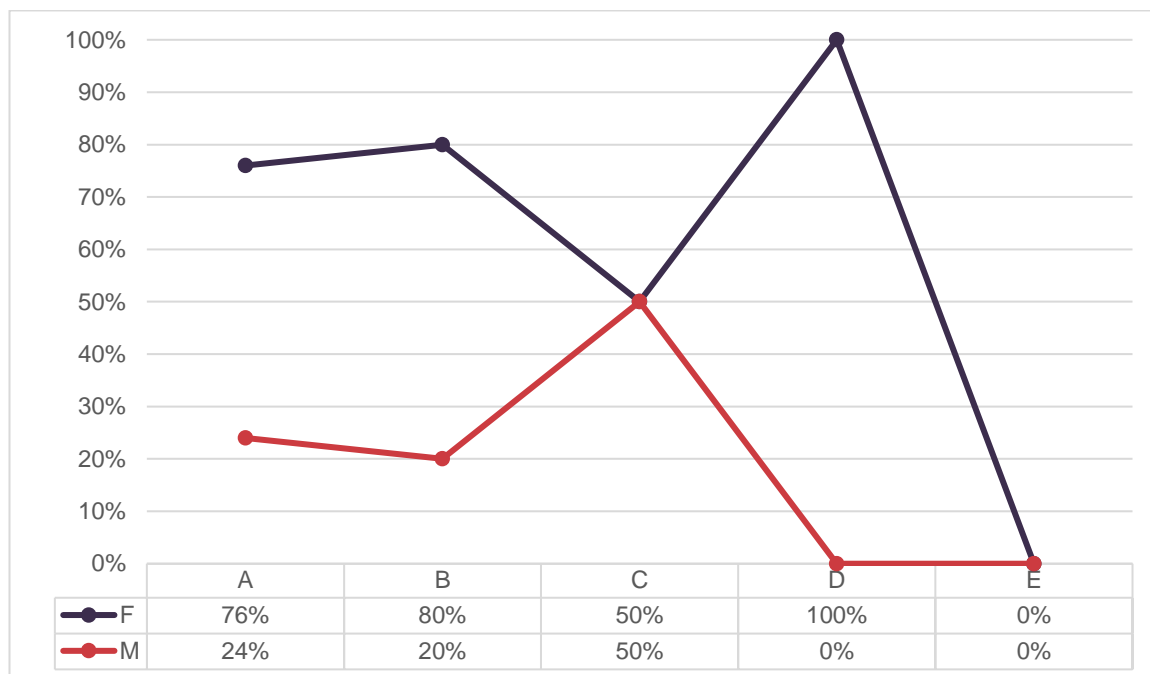


Chart 4: Gender ratio of academic STEM staff by level in teaching specialisation 2018-2020.

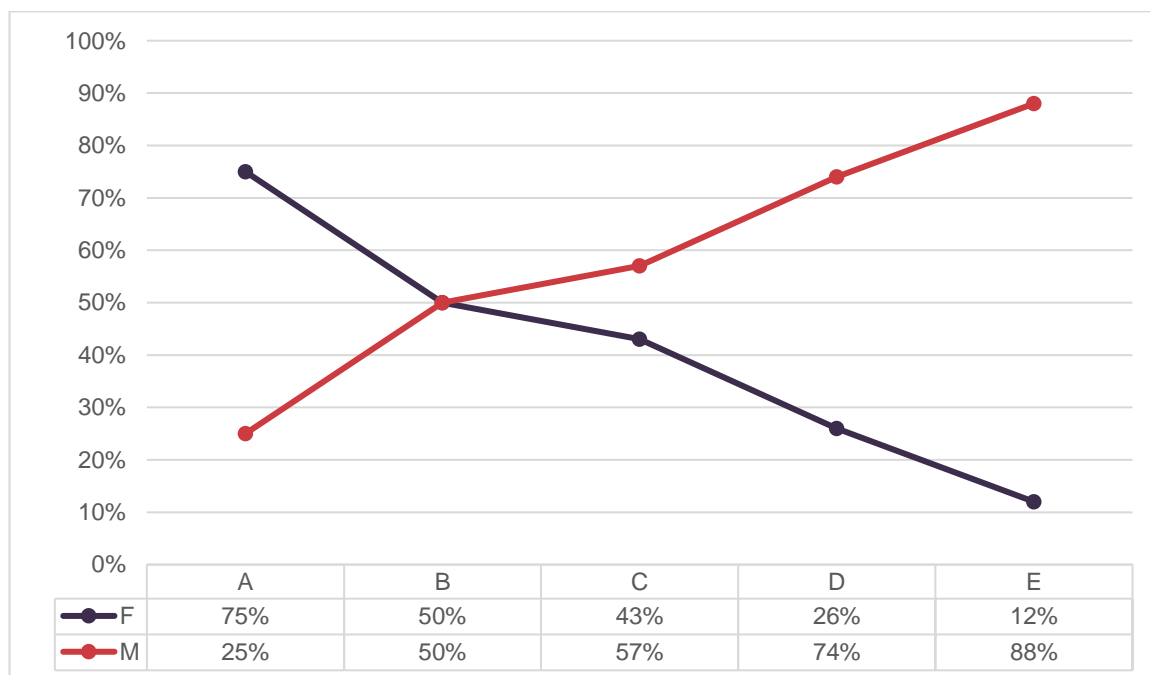


Chart 5: Gender ratio of academic STEM staff by level in teaching and research 2018-2020.

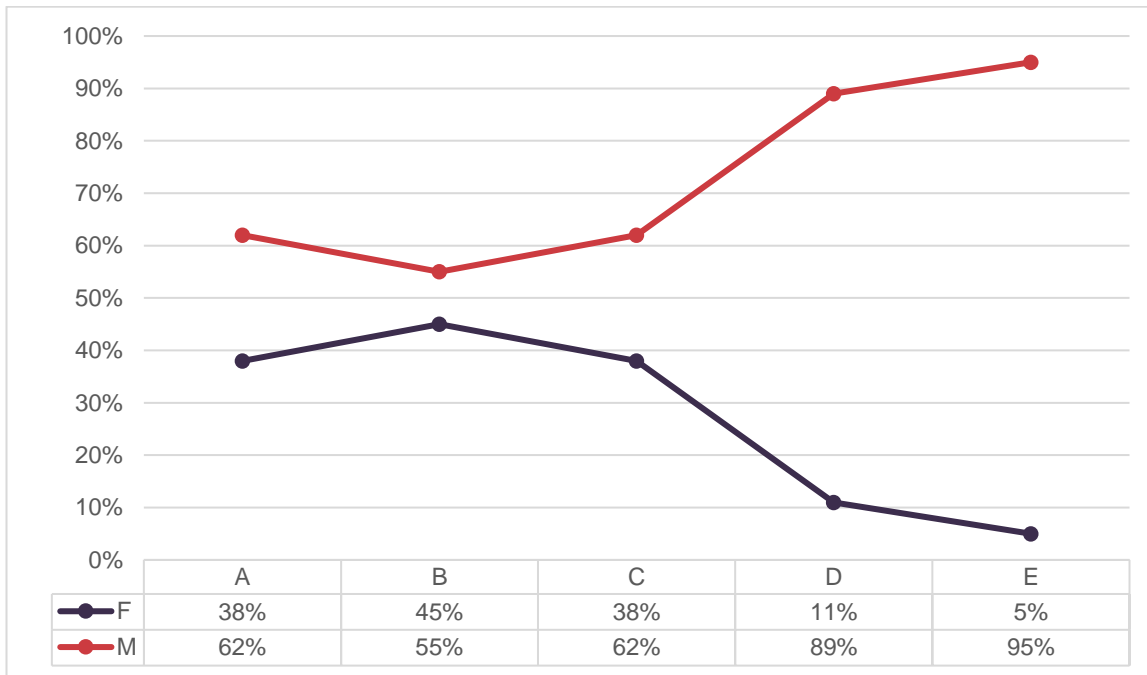


Chart 6: Gender ratio of academic STEM staff by level in research specialisation 2018-2020.

Looking at STEM staff across specific works areas 2018-2020 highlights in which STEM disciplines women are most underrepresented (Appendix 3; Chart 7):

- Men tended to outnumber women in every STEM work area except the School of Health and Medical Sciences (55% female), School of Nursing and Midwifery (89% female), and School of Psychology and Wellbeing (62% female).
- Gender discrepancy is highest in the School of Engineering (5% female), and also present with female representation between 28-31% in the research institutes and centres; School of Business; School of Mathematics, Physics and Computing; and School of Surveying and Built Environment.

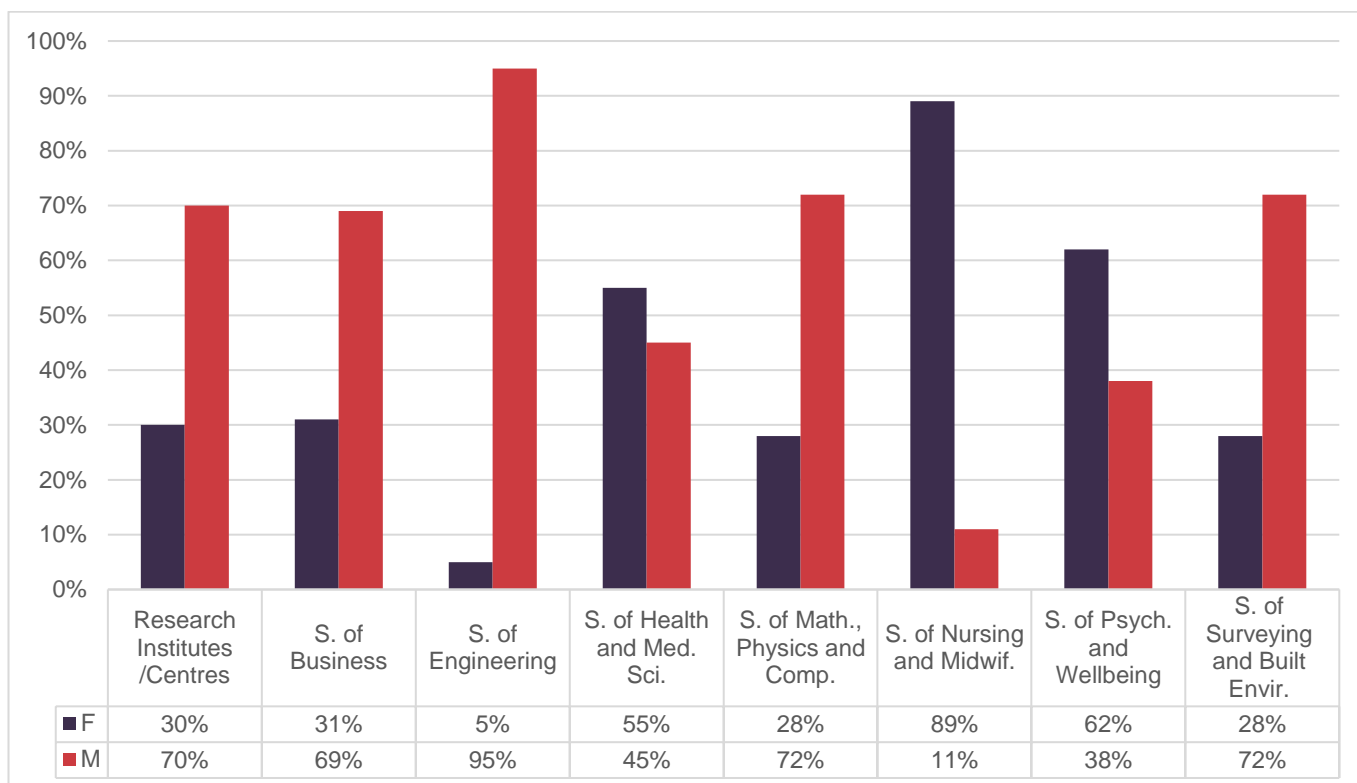


Chart 7: Gender ratio of academic STEMM staff by School/Institute/Centre 2018-2020.

## Actions and outputs

### Support for STEMM doctoral (research) students

To support female HDR students to complete their doctoral studies in STEMM disciplines, UniSQ committed to a number of key actions in the ASBA Action Plan.

The ASBA Action Plan committed to offering two women-only PhD scholarships per year (2021-2024) in STEMM disciplines with the greatest gender disparity. The scholarships offer an annual stipend of \$33,000 AUD over three years for each recipient, to reduce the financial burden on doctoral students that is a common contributor to PhD non-completion. UniSQ has thus far granted six scholarships, as well as one scholarship extension to a candidate whose family caring responsibilities were increased due to the COVID-19 pandemic (Table 3; Image Grid 1).

PhD Candidate	Year Awarded	UniSQ School/Centre	PhD Topic
<b>Piumika Ariyadasa</b>	2021	Centre for Future Materials	Long-term credibility of eco-friendly geopolymer material in sewer lining to combat the global threat of microbial-induced concrete corrosion (MICC) to concrete sewer infrastructure.
<b>Jee Sook Ra</b>	2021	School of Mathematics, Physics and Computing	EEG signal processing and developing a robust and reliable method for epileptic seizure prediction.
<b>Bridget Finlayson</b>	2022	School of Agriculture and Environmental Science / Centre for Applied Climate Sciences	Marine turtle species' responses to climate change, climate variability and coastal development. Her research considers oceanic changes and agricultural and urban land use factors, focusing on species that nest along the Fraser Coast, eastern Queensland, Australia.
<b>Leyde Briceno Medina</b>	2022	School of Mathematics, Physics and Computing	Estimation of erythemally-effective solar ultraviolet irradiation under attenuation factors using explainable Artificial Intelligence methods.

<b>Simi Job</b>	2023	School of Mathematics, Physics and Computing	Reinforcement learning for optimal treatment strategies.
<b>Nasrin Begum</b>	2023	School of Mathematics, Physics and Computing	Model-based cluster analysis of socio-demographic factors and their association with childhood obesity in Australia.

Table 3: SAGE scholarship recipients 2021-2023.

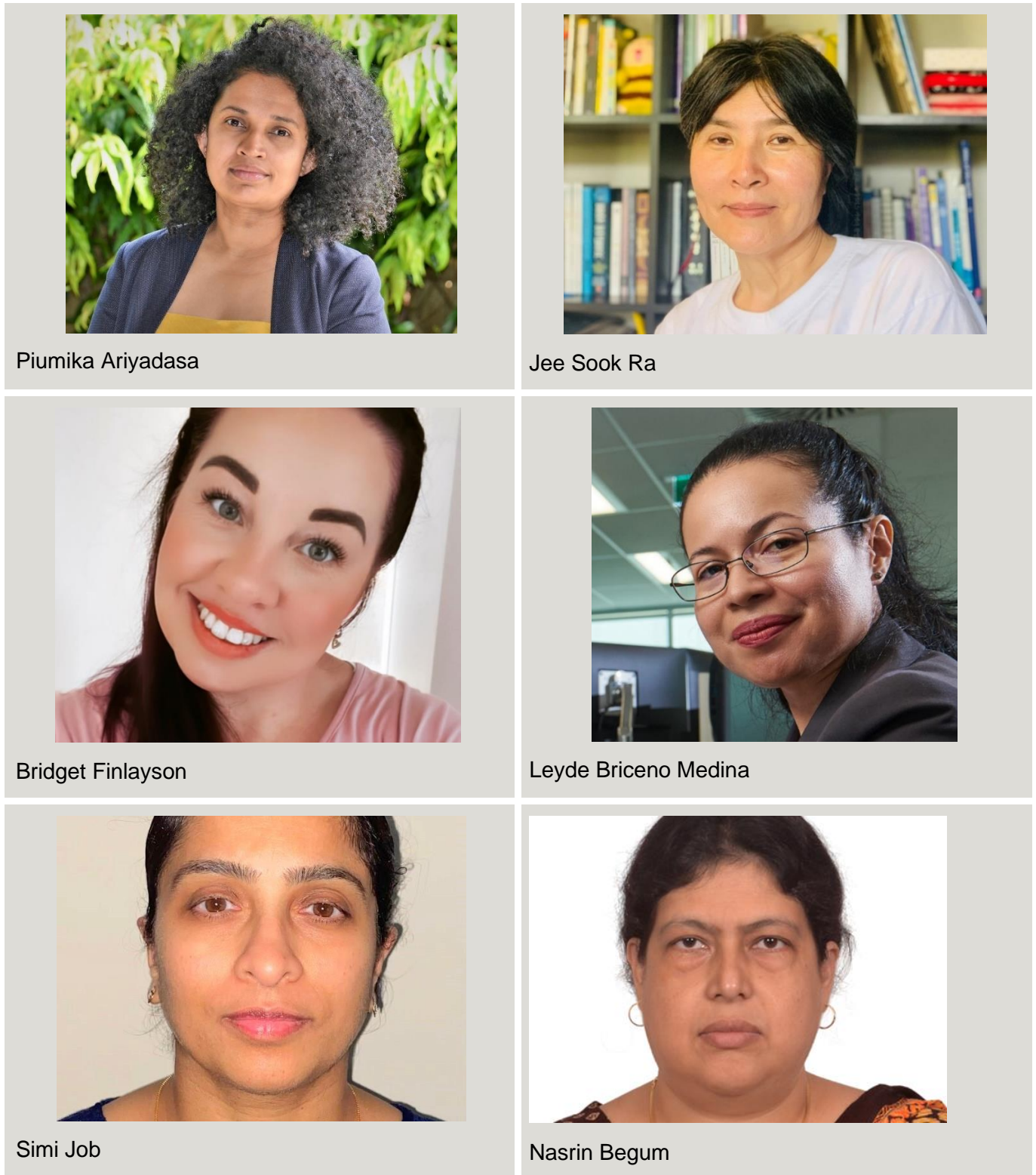


Image Grid 1: SAGE scholarship recipients 2021-2023.

The SAGE program also engaged in a range of ad-hoc work to support diversity and inclusion in HDR scholarships generally, including:

- A HDR Student Scholarship Procedure was developed in 2023 to formalise scholarship processes. The procedure supports part-time variations to study for students with significant family caring responsibilities or ongoing medical conditions, as well as parental leave (for a birth or adoption) for eligible scholarship holders.
- A representative from UniSQ’s internal SAGE team was present at scholarship selection panel meetings from 2023, to discuss and advise on reducing unconscious bias in the scholarship selection process.

Another key action to support HDR program completion is to allow academic employees to take time buyout from work duties to progress their doctoral studies. UniSQ implemented the Doctoral Support Program for women only from 2020-2022, which was opened to all staff from 2023 due to high levels of interest. The program offers eligible academic employees a period of release (up to four months) from working duties to significantly progress or finalise their doctoral studies, thus offering a clearer pathway for academics to move from Level A into postdoctoral Level B positions.

To support under-represented cohorts, several places in the program are identified for women and First Nations employees, and all applications are considered under the principles of achievement relative to opportunity. To further support program uptake, in 2023 the Deputy Vice-Chancellor (Research and Innovation) delivered targeted communications to senior executives in STEMM urging them to encourage applications and trouble-shoot case-by-case barriers for eligible staff in their work areas. The program to date has supported 11 STEMM employees (65% of total program participant cohort 2020-2023) and six non-STEMM employees (35%), inclusive of 15 women (88%) with nine in STEMM (53%), and two First Nations employees (12%; Table 4).

	2020		2021		2022		2023				Total HC	Total %
	F		F		F		F		M			
	HC	%	HC	%	HC	%	HC	%	HC	%		
STEMM	1	6%	3*	18%	2	12%	3	18%	2	12%	11	65%
Non-STEMM	1	6%	2	12%	1*	6%	2	12%	0	0%	6	35%
<b>Total</b>	<b>2</b>	<b>12%</b>	<b>5</b>	<b>29%</b>	<b>3</b>	<b>18%</b>	<b>5</b>	<b>29%</b>	<b>2</b>	<b>12%</b>	<b>17</b>	<b>100%</b>

Table 4: Doctoral Support Program uptake 2020-2023.

Note: HC = Head count. % = % of all program participants 2020-2023.

\* HC includes one First Nations employee.

### Support for postdoctoral career entry

ASBA committed to offering two women-only postdoctoral fellowships annually (2021-2023) in STEMM disciplines with high gender disparity. The fellowships offer three-year employment terms at academic level B (Teaching and Research), and also focus on offering support to these women to enable them to pursue ongoing careers (including promotion) at UniSQ.

The program completed in 2023, with six postdoctoral fellows successfully appointed across various STEMM Schools (Table 5; Image Grid 2). Unfortunately, one 2021 postdoctoral fellow left the University in 2022 to pursue opportunities in a different location. This resulted in the University undertaking a further recruitment process in late 2022 to fill the vacant position and maintain our strong commitment to improving the gender balance in STEMM disciplines.

Postdoctoral Fellow	Year Recruited	UniSQ School	Research Interests	Notes
<b>Dr Mahbuba Afrin</b>	2021	School of Sciences (since renamed)	Developing multi-agent cloud robotics to minimise resource and energy consumption.	Left in 2022 to pursue other opportunities
<b>Dr Tamara Sopek</b>	2021	School of Engineering	Optical diagnostics, experimental aerodynamic testing of hypersonics flows and scramjet combustion and high-speed fluid mechanics.	
<b>Dr Ekta Sharma</b>	2022	School of Mathematics, Physics and Computing	Advanced artificial intelligence, statistics, and data science; in particular, developing next-generation data security technologies to help solve communication problems in the context of space satellite challenges.	
<b>Dr Belinda Nicholson</b>	2022	School of Mathematics, Physics and Computing	Finding exoplanets and measuring their fundamental properties: size, mass and orbital parameters; and improving the precision of planet mass measurements by investigating how the behaviour of the host star impacts its observed light measured with photometry and spectroscopy.	
<b>Dr Kiru Pasupathy</b>	2022	School of Engineering	Developing concrete using recycled materials and exploring new technologies to optimise the usage of waste materials in concrete.	Recruited to vacancy when Dr Mahbuba Afrin resigned
<b>Dr Asha Mathew</b>	2023	School of Engineering	Biomaterials, especially in the area of bio-fabrication, drug delivery, antibiotic coating on polymeric scaffolds, developing antimicrobial nano-textured surfaces on 3D printed metallic and polymeric implants and for other industrial applications.	
<b>Dr Rebecca McElroy</b>	2023	School of Mathematics, Physics and Computing	Using large datasets to understand how supermassive black holes and their host galaxies co-evolve, and investigating how galaxy kinematics change as galaxies collide.	

Table 5: Vice-Chancellor's Postdoctoral Research Fellows (Women in STEMM) 2021-2023.



Dr Tamara Sopek



Dr Ekta Sharma

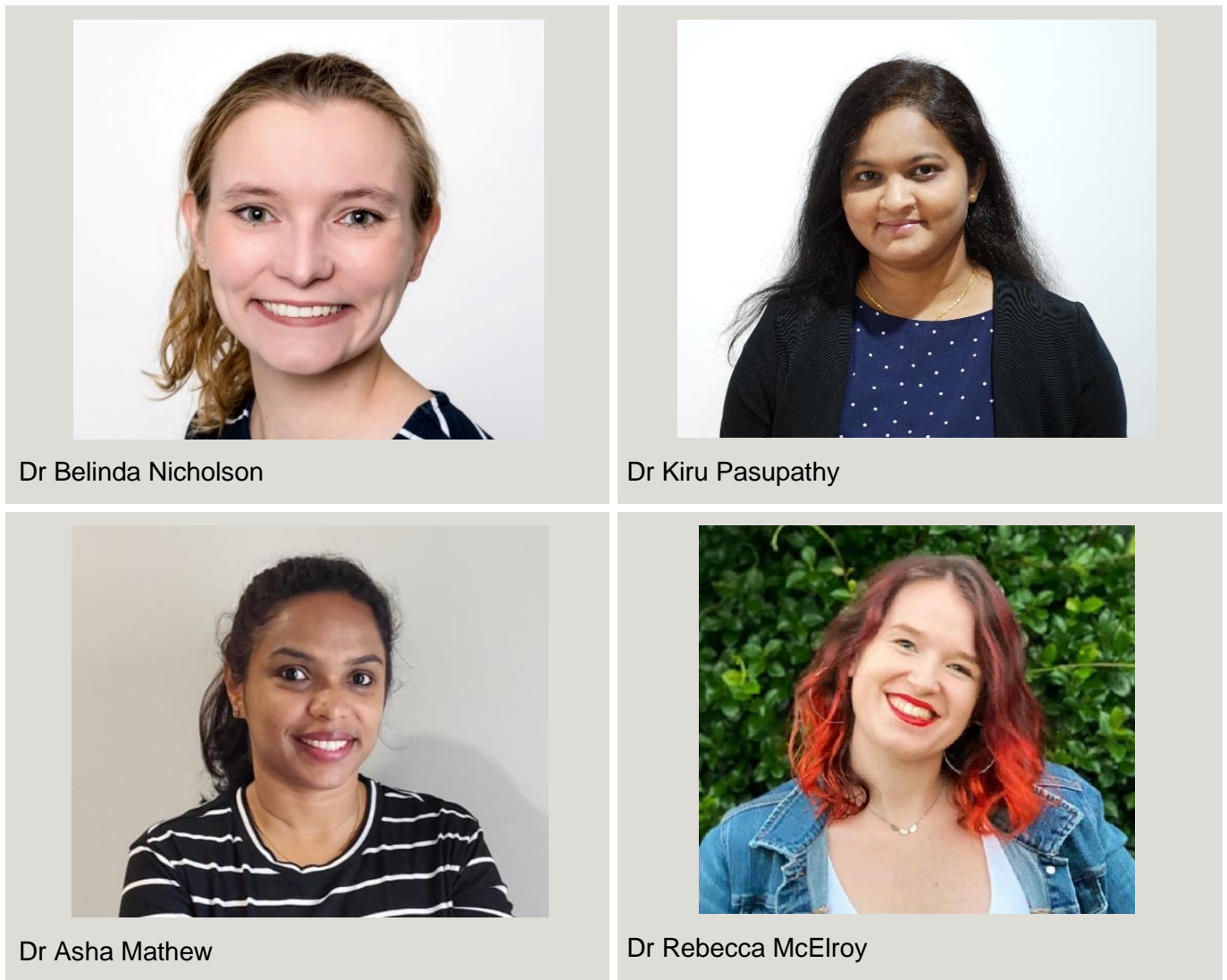


Image Grid 2: Vice-Chancellor's Postdoctoral Research Fellows (Women in STEMM) 2021-2023.

### Improving the visibility of women in STEMM

A number of initiatives outlined below are working to improve visibility and engagement with women in STEMM at UniSQ, with multiple aims to:

- Recognise, celebrate and support leading UniSQ women in STEMM
- Highlight women STEMM role models to HDR STEMM students, other STEMM employees, and prospective STEMM employees to encourage them to enter and progress in STEMM studies and careers at UniSQ
- Develop a strong culture of diversity and inclusion

Following a multi-year program of work, UniSQ delivered a new research data management system in 2022: the Research Information Solutions Ecosystem (RISE). RISE offers improved data capture to ensure all researchers involved in a research project are identified, resulting in better attribution of research income to women (both employees and students) who lead or participate in research activities.

The Research Excellence Award for Women in STEMM was introduced in 2021 and is delivered as part of the annual Staff Excellence Awards (Image Grid 3). This Award both rewards the successes of UniSQ's leading women in STEMM and increases the visibility of female role models. In 2022, the Award application documents were updated to encourage applicants to outline achievement relative to opportunity (ARtO). ARtO recognises that an individual's accomplishments may be impacted by available

resources and circumstances, and that women's successes are often systemically impacted by issues such as access to opportunities and caretaking responsibilities.



*We understand that everyone has a variety of different personal circumstances and backgrounds, experiences and responsibilities that have impacted their careers. We recognise the importance of considering achievement relative to opportunity and encourage you to share your career breaks and/or related impacts so that we better understand your unique opportunities and achievements.*

***(Achievement relative to opportunity wording)***



Associate Professor Weena Lokuge accepting the 2021 award from Mr John Dornbusch (Chancellor) for her work in civil engineering.



Professor Sonja March accepting the 2022 award from Mr John Dornbusch (Chancellor) for her research and teaching in psychology and health.



Professor Xujuan Zhou accepting the 2023 award from Mr John Dornbusch (Chancellor) for her research, teaching and program development work in information technology.

Image Grid 3: Research Excellence Award for Women in STEMM recipients 2021-2023.



The Women in STEMM Sessions were launched in early 2022 as regular online events, with session frequency reduced in 2023 in response to staff feedback about their busy schedules. The sessions are open to women in STEMM staff and HDR students and involve presentations from senior leaders and peers, group discussions, and activities dedicated to specific components of an academic career (Table 6). The Deputy Vice-Chancellor (Research and Innovation) regularly attends these sessions to present in his capacities as both the SAGE program lead and the head of research. The sessions support participants to:

Hear insights into different career areas
Learn about UniSQ programs and opportunities to support career progression
Hear from successful women in STEMM about their career trajectory (role models)
Develop community through peer discussion
Provide feedback on the experience of working in STEMM

Session	Topic/s	Participant Count
<b>2022 Program</b>		
Session 1: Introductory session	<ul style="list-style-type: none"> <li>UniSQ's Diversity and Inclusion Framework</li> <li>UniSQ's SAGE program</li> </ul>	40
Session 2: Planning your career	<ul style="list-style-type: none"> <li>UniSQ's research and teaching priorities</li> <li>UniSQ's Academic Employee Expectations Framework</li> </ul>	37
Session 3: Applying for grants	<ul style="list-style-type: none"> <li>Applying for grants at UniSQ</li> <li>UniSQ's grant reviewer scheme for category 1 funding applications by women in STEMM</li> </ul>	23
Session 4: Finding a mentor	<ul style="list-style-type: none"> <li>Mentorship experiences</li> <li>The future of mentorship at UniSQ</li> </ul>	16
Session 5: Elevating your teaching profile	<ul style="list-style-type: none"> <li>HE Advance Fellowships</li> <li>Collegial Observation of Learning and Teaching (COLT) program</li> </ul>	17
Session 6: Seeking academic promotion	<ul style="list-style-type: none"> <li>UniSQ's Senior Academic Women's Promotion Program</li> <li>Academic promotion mentors</li> </ul>	27
Session 7: 'My story'; women in STEMM at UniSQ	<ul style="list-style-type: none"> <li>Presentations from several of UniSQ's women in STEMM who have achieved success in their career</li> </ul>	16
<b>2023 Program</b>		
Session 1: Academic Promotion	<ul style="list-style-type: none"> <li>The landscape of academic promotion in Australia</li> <li>The culture of academic promotion at UniSQ</li> <li>The academic promotion process at UniSQ</li> <li>How to work towards promotion and academic development opportunities at UniSQ</li> </ul>	25
Session 2: Research	<ul style="list-style-type: none"> <li>The research landscape of Australia and the world</li> <li>UniSQ's research flagships</li> <li>Research culture at UniSQ</li> </ul>	26

	<ul style="list-style-type: none"> <li>• UniSQ opportunities for researcher development, inc.: <ul style="list-style-type: none"> <li>◦ UniSQ Research Mentoring Program</li> <li>◦ Grant reviewer scheme for cat 1 funding applications by women in STEM</li> <li>◦ Actively Managing Your Research Career module</li> </ul> </li> <li>• External opportunities for researcher development</li> </ul>	
Session 3: Academic Expectations Framework	<ul style="list-style-type: none"> <li>• Career planning and goal-setting using the Academic Expectations Framework</li> <li>• Seeking and sustaining ongoing development</li> <li>• Life/work balance</li> <li>• Development opportunities at UniSQ: <ul style="list-style-type: none"> <li>◦ LinkedIn Learning</li> <li>◦ Women's academic development programs (ECAWDP and SAWDP)</li> <li>◦ Coaching</li> <li>◦ Management Essentials</li> <li>◦ Key Capability Development Program</li> </ul> </li> </ul>	14 signed up, 7 attended (in-person workshop)
Session 4: Women's Stories	<ul style="list-style-type: none"> <li>• Presentations from four UniSQ women in STEM on their life, career journey, and advice for early-career academics</li> </ul>	28

Table 6: Women in STEM Sessions 2022-2023.

Events have also played an important role in growing UniSQ's inclusive culture and engaging with its STEM staff. In Q4 2021, UniSQ hosted a film screening of *The Leadership*, a documentary about 76 female scientists who reveal the challenges they face to maintain fulfilling careers in STEM (Image Grid 4). Following the screening, UniSQ's Deputy Vice-Chancellor (Research and Innovation) facilitated a panel discussion comprising the Deputy Vice-Chancellor (Academic); Executive Dean (Health, Engineering and Sciences); a woman in STEM Associate Professor (Civil Engineering); and external guest Olivia Willis, a health and science journalist from the ABC. The event attracted an audience of 70+ UniSQ staff and students in-person and online. The event highlighted the commitment of UniSQ's leaders to recognising and challenging the difficulties that face women in STEM, and brought together both academic and professional staff to engage with this important topic.





Image Grid 4: The Leadership film screening

In Q3 2023, the SAGE team hosted a SAGE Roadshow across two campuses. The Roadshow included presentations from the Manager (Strategic Initiatives) overseeing the SAGE program, and women in STEMM including the Head of School and Dean (Physics and Computing) and several Vice-Chancellor’s Women in STEMM Postdoctoral Fellows. Presentations highlighted the progress of the SAGE program to date, the issues of diversity and inclusion the University is working to address, and the stories and career journeys of some of the University’s women in STEMM. The events attracted 60-80 attendees each (both professional and academic staff).



*“Great presentations. Very informative. Great to hear the academic and personal journeys of some of the guiding lights in STEMM areas at UniSQ.”*

*– SAGE Roadshow attendee*

“Thank you for organising the Roadshow! The speakers were engaging and it was a great way to learn more about the SAGE program.”

– SAGE Roadshow attendee



# Outcomes

## STEMM doctoral (research) students

In 2023, UniSQ had 551 active HDR students in STEMM disciplines (42% female), with 464 (84%) of those students undertaking doctoral studies (41% female; Table 7; Chart 8). This marks an 8% increase in female STEMM doctoral students at UniSQ since 2018.

	2021						2022						2023						Total HC	Total %
	F		M		X		F		M		X		F		M		X			
	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
<b>Doctorate (research)</b>	174	38%	285	62%	<6	<1%	203	40%	299	59%	<6	1%	191	41%	273	59%	<6	<1%	1432	85%
<b>Other HDR program</b>	45	56%	35	44%	0	0%	38	49%	40	51%	0	0%	40	47%	45	53%	0	0%	243	15%
<b>HDR Total</b>	219	40%	320	59%	<6	<1%	241	41%	339	58%	<6	1%	231	42%	318	58%	<6	<1%	1675	100%

Table 7: Distribution of active STEMM HDR students 2021-2023.

Note: HC = Head count. % = % of cohort at same degree level in same year.

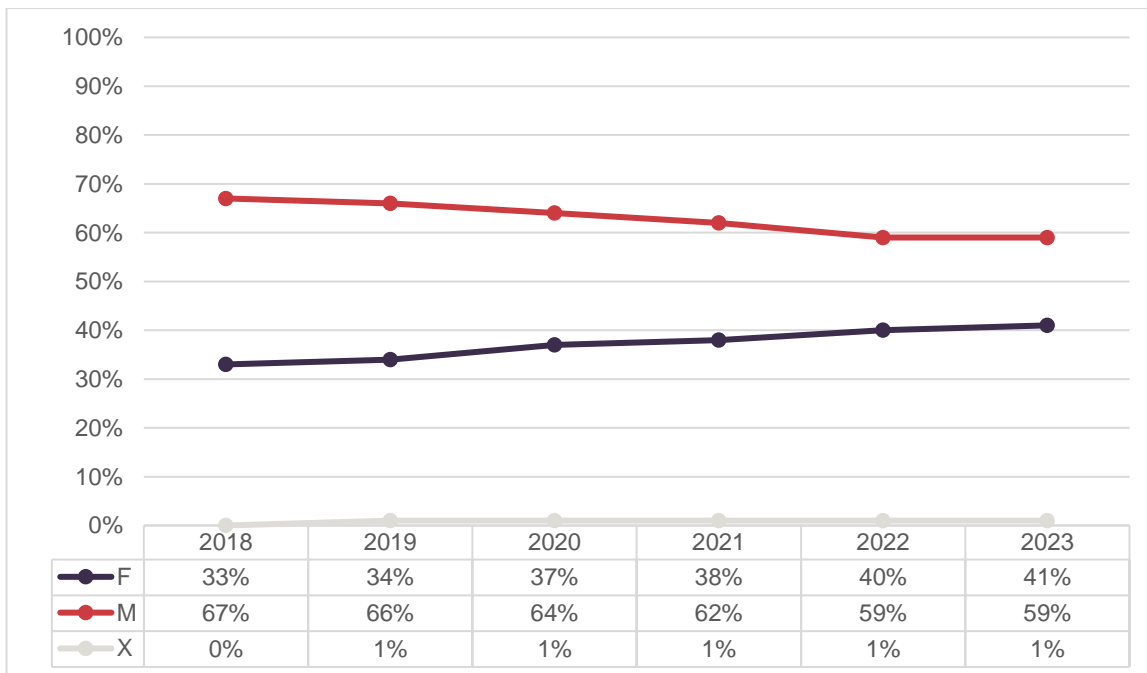


Chart 8: Gender ratio of active STEMM doctoral (research) students 2018-2023.

Rates of HDR program completion have also improved. In 2018, women made up 43% of HDR program completions overall and 42% of doctoral program completions, compared to 2023 when they made up 56% and 54% respectively (Table 8; Chart 9). This marks an increase of 13% female representation for all HDR program completions, and 12% for doctoral program completions since 2018. However, this change was not linear (Chart 9), indicating that further data must be collected to determine patterns in HDR completions.

	2021						2022						2023						Total HC	Total %
	F		M		X		F		M		X		F		M		X			
	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
<b>Doctorate (research)</b>	18	32%	38	68%	0	0%	24	41%	34	59%	0	0%	19	54%	16	46%	0	0%	149	85%
<b>Other HDR program</b>	4	67%	2	33%	0	0%	6	60%	4	40%	0	0%	6	60%	4	40%	0	0%	26	15%
<b>HDR Total</b>	22	35%	40	65%	0	0%	30	44%	38	56%	0	0%	25	56%	20	44%	0	0%	175	100%

Table 8: STEMM HDR program completions 2021-2023.

Note: HC = Head count. % = % of completions at same degree level in same year.

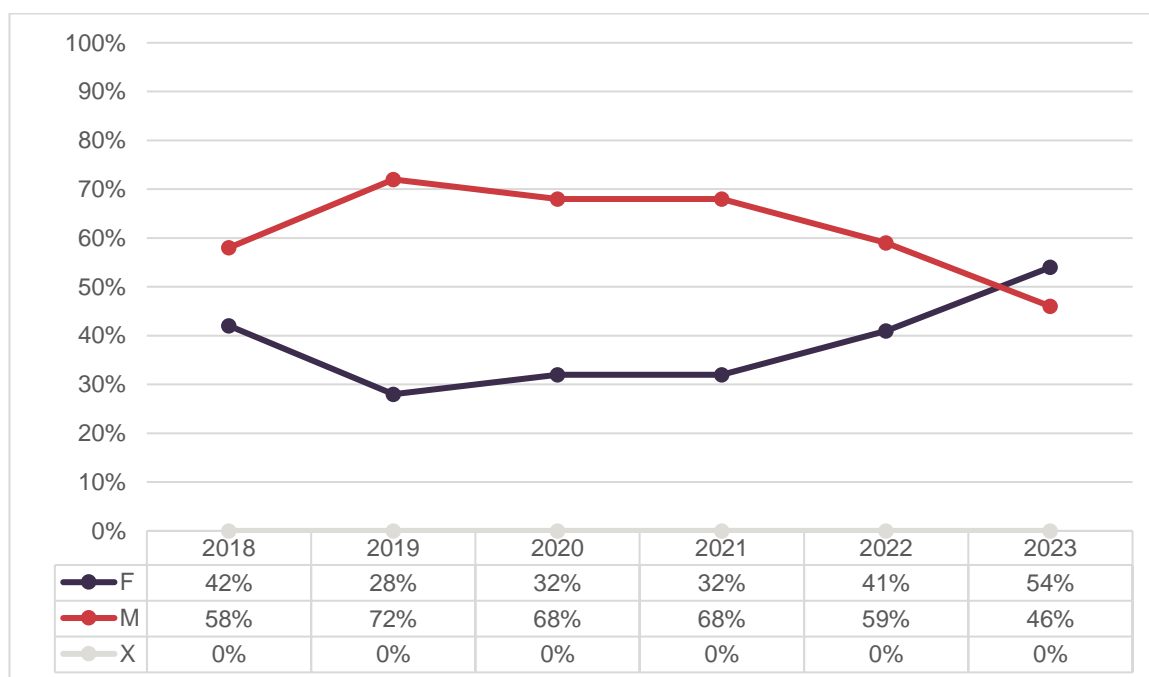


Chart 9: Gender ratio of STEMM HDR doctoral (research) program completions 2018-2023.

### STEMM academic staff

In 2023, UniSQ's gender balance across STEMM disciplines was 44% female to 56% male, marking a 5% improvement in female representation since 2018 (Appendix 4). Gender balance at each academic level over 2021-2023 was similar to 2018-2020 for levels A, B, and C, but saw an improvement at levels D (6% increase in female representation) and E (12% increase in female representation; Chart 10). While improvements at senior levels cannot be directly attributed to the actions outlined in this Cygnet Award, they highlight the changing STEMM trends at UniSQ and the improving visibility of senior role models for the HDR students and early-career women in STEMM UniSQ is working to attract and support.

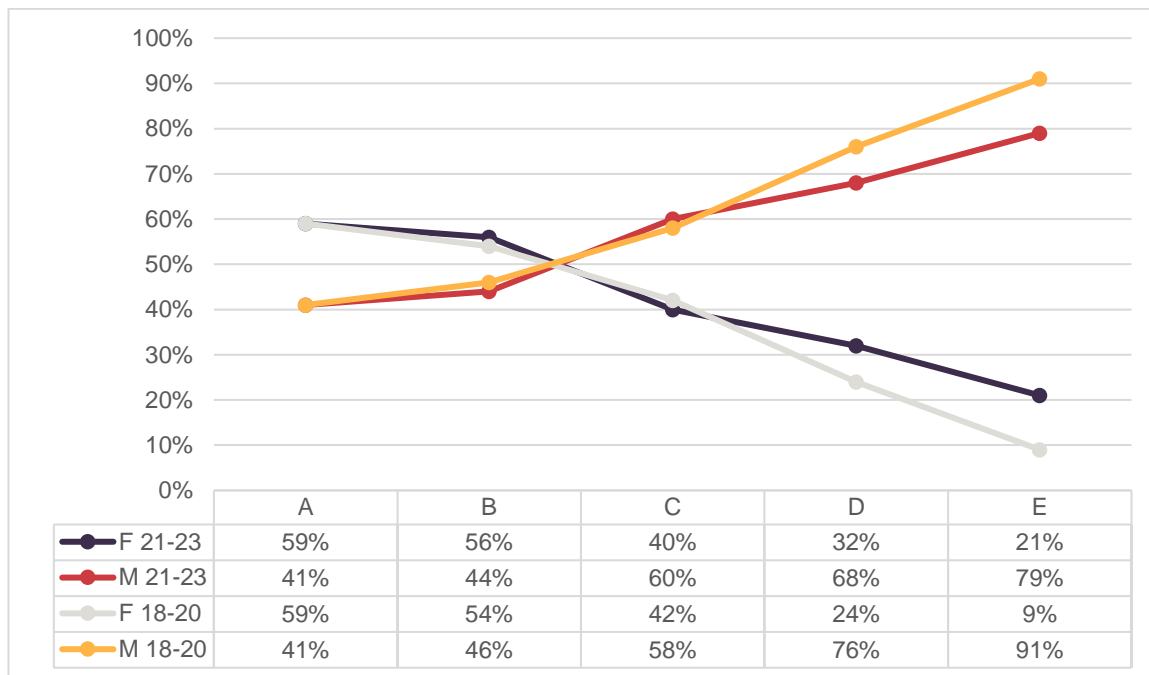


Chart 10: Gender ratio of academic STEM staff by level 2021-2023 compared to 2018-2020.

Trends differed in academic STEM staff 2021-2023 depending on specialisation:

- In the teaching specialisation, women tend to outnumber men at the lower levels (Appendix 5; Chart 11) (though note there are small numbers in teaching specialisation). No comparable pattern can be observed against 2018-2020 data.
- In teaching and research, the gender balance over 2021-2023 compared to 2018-2020 was improved at levels B, D, and E, including a 12% increase in female representation at level E (Appendix 5; Chart 12). The increase at level B is attributable to the women-only STEM postdoctoral fellowship scheme. The increases at levels D and E may be attributable to recruitment and promotion trends at UniSQ, which are explored in our Cygnet Awards for Recruitment and Career Development.
- In the research specialisation, there was a significant improvement of 22% over 2021-2023 compared to 2018-2020 in female representation at level D (Appendix 5; Chart 13). As above, this may be attributable to recruitment and promotion trends at UniSQ over this timeframe.

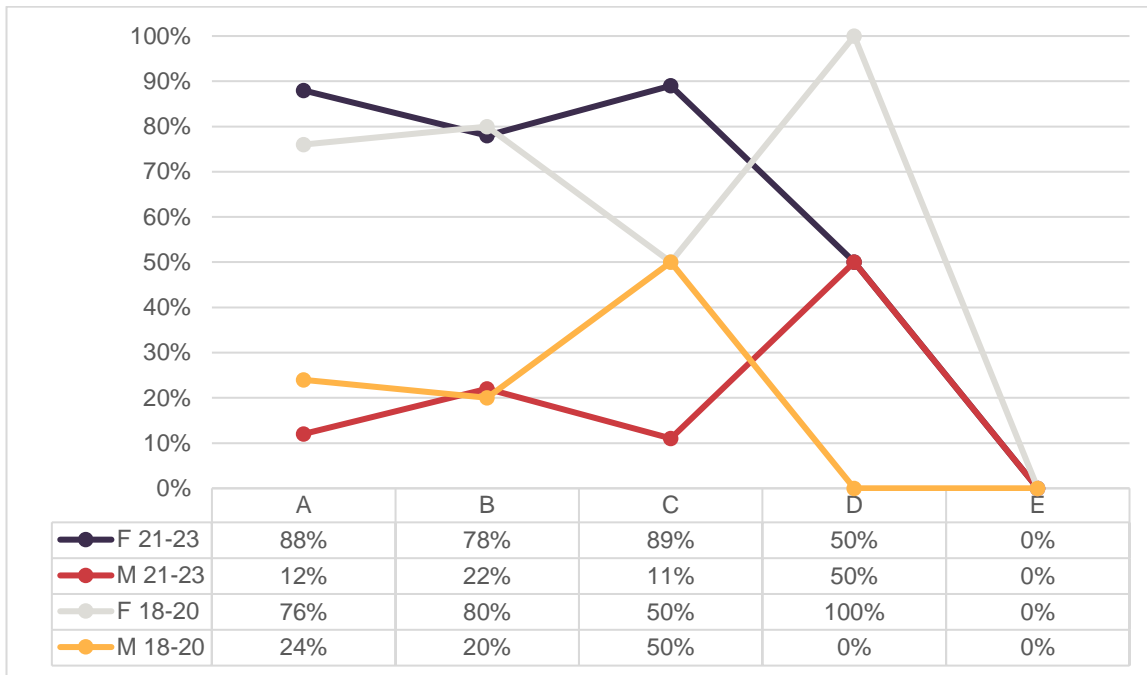


Chart 11: Gender ratio of academic STEM staff by level in teaching specialisation 2021-2023 compared to 2018-2020.

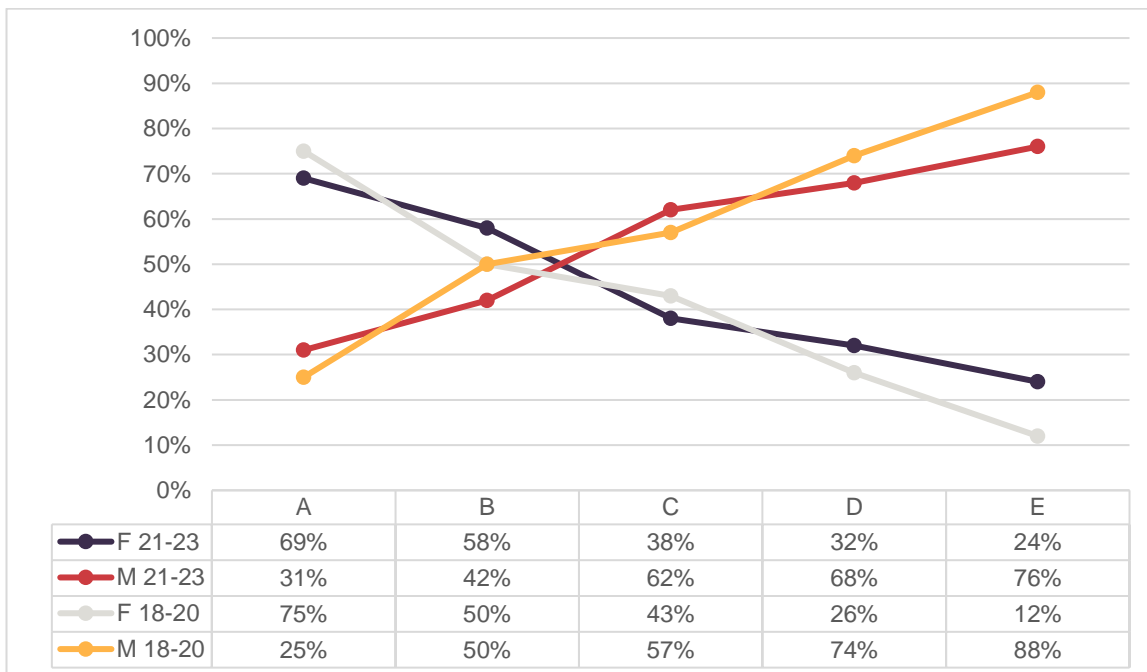


Chart 12: Gender ratio of academic STEM staff by level in teaching and research 2021-2023 compared to 2018-2020.

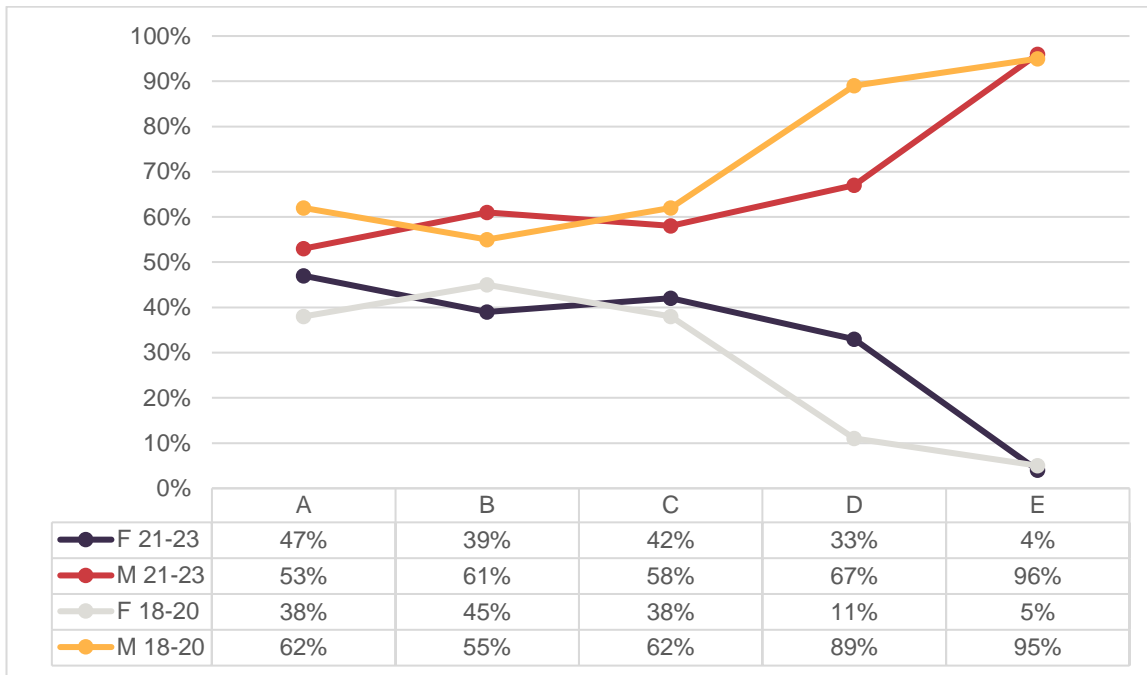


Chart 13: Gender ratio of academic STEM staff by level in research specialisation 2021-2023 compared to 2018-2020.

Comparing the 2018 and 2023 academic staff data by STEM work area highlights that gender balance was improved by 1-8% across all but a few areas (Appendix 6; Chart 14; Table 9). These are the School of Mathematics, Physics and Computing, where female representation fell 9%; and the School of Health and Medical Sciences and School of Psychology and Wellbeing, where the already high ratio of women marginally increased. Further action should be undertaken to understand the trends in the School of Mathematics, Physics and Computing, and identify opportunities to increase female representation.



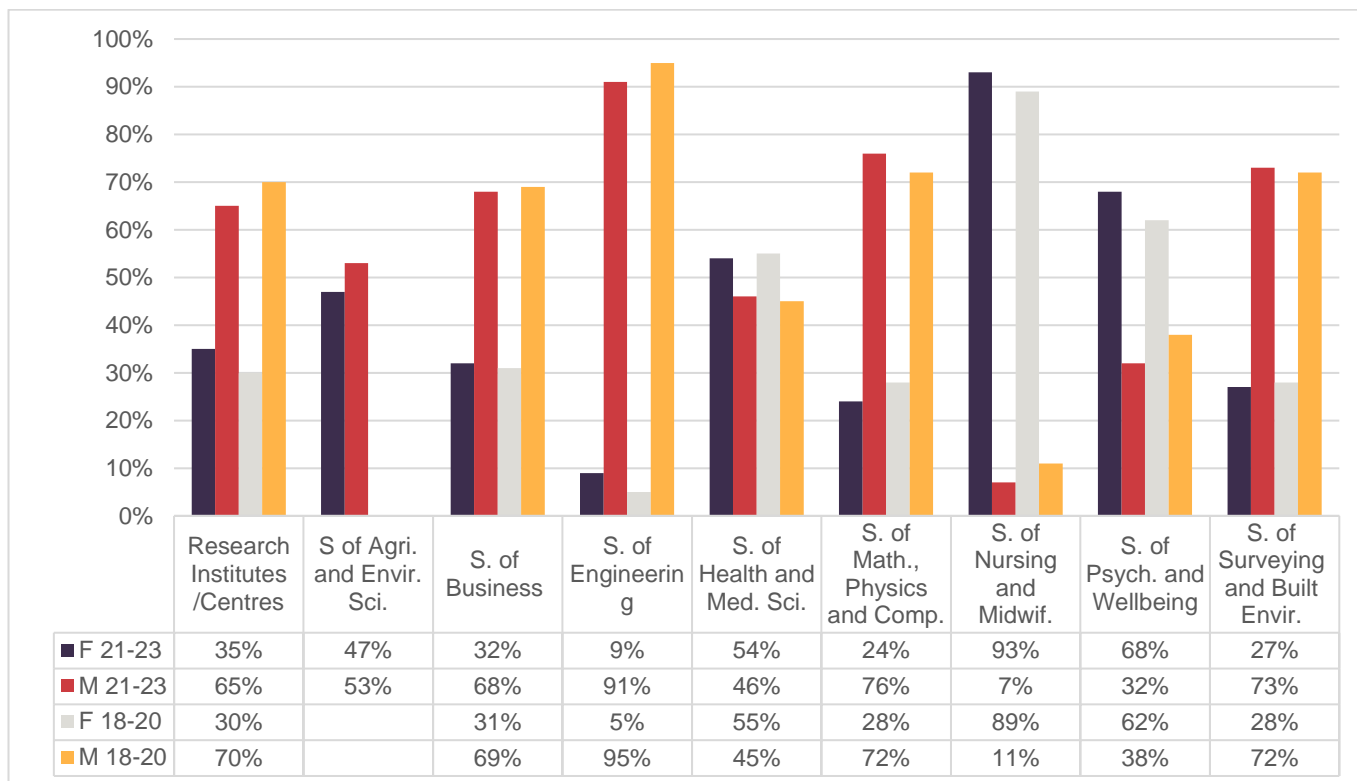


Chart 14: Gender ratio of academic STEM staff by School/Institute/Centre 2021-2023.

Note: School of Agriculture and Environmental Science established mid-2022 so no data available for 2018-2020.

	Research Institutes /Centres		S. of Agri. and Envir. Sci.		S. of Business		S. of Engineering		S. of Health and Med. Sci.		S. of Math., Physics and Comp.		S. of Nursing and Midwif.		S. of Psych. and Wellbeing		S. of Surveying and Built Envir.	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
2018	29%	71%	-	-	22%	78%	3%	97%	54%	46%	28%	72%	90%	10%	65%	35%	25%	75%
2023	36%	64%	50%	50%	30%	70%	9%	91%	58%	42%	19%	81%	89%	11%	70%	30%	29%	71%
Change	↑7%	↓7%	-	-	↑8%	↓8%	↑6%	↓6%	↑4%	↓4%	↓9%	↑9%	↓1%	↑1%	↑5%	↓5%	↑4%	↓4%

Table 9: Comparison of academic STEM staff by School/Institute/Centre 2018 to 2023.

Taken altogether, the outcomes are positive for increased female representation in STEM doctoral studies and careers at UniSQ, though these changes are small. The data indicates that ongoing targeted work is required to better understand and continue to effectively reduce the systemic barriers to women in the STEM pipeline.

## Impact

### Women in STEM scholarships: Qualitative insights

Feedback sought by email from all recipients of the SAGE scholarships was overwhelmingly positive (Table 10). The feedback highlights that the scholarships provided welcome financial support and also inspired confidence. Several women noted having a lack of confidence in themselves (e.g., due to age,

cultural and linguistic diversity, mental health) and that the scholarships helped them to feel more hopeful about equal opportunity in STEMM, and to see themselves as role models for others.

Scholarship Recipient	Feedback to email enquiry “How has the SAGE scholarship impacted you in your research and career?”
<b>Piumika Ariyadasa</b>	“Receiving this SAGE Athena SWAN Scholarship means not only a recognition of my academic achievements but a huge boost to my confidence as a woman in engineering research. This is an excellent opportunity for women to thrive, shine and be positive role models to help emerging young women into STEMM careers.”
<b>Jee Sook Ra</b>	“As I got married, had children, and raised children, my old aspirations for academic achievement faded away. Then, however, seemingly impossible things became possible with this SAGE Athena SWAN Scholarship. As an aged, married, immigrant woman, being able to regain the academic ambitions I had to give up on my own is almost a miracle. I am very grateful and excited that this scholarship gives me equal opportunity and confidence.”
<b>Bridget Finlayson</b>	“After a breakdown in 2018 I’ve struggled to feel confident, and studying has been a huge part of my therapy. Receiving the SAGE Athena SWAN Scholarship is an acknowledgement of the hard work I’ve put into my studies. It will enable me to continue with my PhD full time and to be a role model for other young women wanting to pursue a career in STEMM.”
<b>Leyde Briceno Medina</b>	“I am honoured and grateful to receive the SAGE Athena SWAN Scholarship, and thanks to this financial support I can carry out my doctoral studies. The SAGE Athena SWAN Scholarship promotes gender equity and provides career progression opportunities for women in STEMM.”
<b>Simi Job</b>	“The SAGE Athena SWAN Scholarship is a timely acknowledgement of my hard work during my recently completed master's degree. The financial support offered by the scholarship is helping me to focus completely on my PhD. I am grateful for this opportunity and hope these kinds of opportunities encourage more women to take up STEMM research.”
<b>Nasrin Begum</b>	“I had a long dream to pursue a higher degree in Australia. The SAGE scholarship will make a huge contribution to my study. This scholarship will allow me to give more focus on my studies. Moreover, I have migrated to Australia recently and I would like to establish my career anew by taking higher education. This scholarship has opened that opportunity to me as well as will help me achieve my educational and career goals.”

Table 10: Qualitative feedback from SAGE scholarship recipients.

## Doctoral Support Program: Qualitative insights

Feedback was sought via email and received from four of the nine women in STEMM who engaged with the Doctoral Support Program 2020-2023. The feedback shows the program is instrumental in supporting UniSQ employees to complete their PhDs faster than they otherwise would have (Table 11). For example, “I was able to complete the write up of my thesis and significantly progress toward the completion of my PhD and in turn, move forward in my career.” Program recipients were directly asked for feedback on how the program could be improved, and all feedback received indicated the program was straightforward to apply for and required no changes.

Program Participant	Feedback to email enquiry “Provide your own general feedback or respond to any of the prompt questions below:
	<ul style="list-style-type: none"> <li>• How did you find the process of applying for the program?</li> <li>• How much time did you take off work duties to progress your studies?</li> <li>• What impact has the program had on your studies and/or career?</li> <li>• What, if anything, could be improved about the program?</li> <li>• Do you have any thoughts about this program as an initiative to support individuals, including women in STEMM and First Nations staff, to move upwards in their careers?”</li> </ul>
<b>2021 Woman in STEMM Participant</b>	<p>“I found the process for applying to be very straight forward and not at all time consuming.</p> <p>The program allowed me to spend uninterrupted time in the laboratory to complete experiments, make six trips to the University of Queensland to use equipment not available at UniSQ, make eight trips to RBWH to deliver samples for</p>

	<p>analysis, and make two trips to Griffith University to deliver my putative vaccines for pre-clinical trial in mice (not possible at UniSQ due to closure of the Animal Facility) and then collect the serum samples at the end of the trial. It also provided an opportunity for me to make considerable progress on writing my thesis.</p> <p>I truly appreciate the opportunities provided by the program and see no need for improvement.”</p>
<b>2022 Woman in STEMM Participant</b>	<p>“I found the application process to be quite straightforward and user-friendly.</p> <p>It has allowed me to finish my PhD earlier than I would have without leave.</p> <p>I don't believe anything needs to change.</p> <p>Thank you for supporting my study leave.”</p>
<b>2022 Woman in STEMM Participant</b>	<p>“The application process was straightforward. I felt supported by my Head of School and fellow colleagues that had previously applied and received buy out to further or complete their PhDs. The application guide was not difficult to follow which made the process feel manageable.</p> <p>I was able to complete the write up of my thesis and significantly progress toward the completion of my PhD and in turn, move forward in my career. I'm very thankful to have had this opportunity and time to really focus on my studies.</p> <p>I believe this program is highly relevant and an important opportunity for all staff. It should definitely be promoted.”</p>
<b>2023 Woman in STEMM Participant</b>	<p>“The opportunity to buyout half of my teaching commitments was greatly appreciated.”</p>

Table 11: Qualitative feedback from Doctoral Support Program participants.

## Vice-Chancellor’s Fellowships for Women in STEMM: Qualitative insights

Email feedback received from five of the six postdoctoral fellows was overwhelmingly positive (one fellow did not respond due to being only newly appointed at the time of seeking feedback; Table 12). The fellows all noted that the fellowships not only provided them an opportunity to progress in their chosen career field, but is also an important initiative to improve diversity and inclusion and make women more visible in STEMM fields.

<b>Fellow</b>	<b>Feedback to email enquiry “How has the SAGE scholarship impacted you in your research and career?”</b>
<b>Dr Tamara Sopek</b>	<p>“The percentage of women in STEMM is still very low, and in engineering it is less than 15%. This Fellowship not only helps to improve my chances of realising my dreams and building a career in my chosen field, but supports increasing those percentages in general. There is a saying that <i>You can't be what you can't see</i> – representation and visibility are important, and when girls see me and other female scientists and engineers doing what we love, they will hopefully feel encouraged to pursue their own dreams in STEMM.”</p>
<b>Dr Ekta Sharma</b>	<p>“I am very passionate about working and enhancing opportunities for women in STEMM, and being awarded for something you believe in is the cherry on the cake. This fellowship supports the commitment to improving career pathways for women in STEMM. I am hopeful that gradually this support and fellowship opportunity will turn the tide on Australia's maths deficit and strengthen maths education and participation of women across the discipline.”</p>
<b>Dr Kiru Pasupathy</b>	<p>“This Fellowship will provide me with invaluable support and resources to further advance my research and career goals as a woman in academia. With access to mentorship, networking opportunities, and funding, this fellowship will enable me to enhance my research skills, expand my professional network, and make meaningful contributions to my field while also promoting diversity and equity in academia.”</p>
<b>Dr Belinda Nicholson</b>	<p>“This fellowship is the pathway to the career of my dreams. It is allowing me to gain further independence as a researcher by supporting me to start new international collaborative projects. It is also a position that gives me the opportunity to embody the change I want to see in the world to increase the access and participation of underrepresented groups in STEMM through the way I conduct my work, and by being an example for the generations to come.”</p>
<b>Dr Asha Mathew</b>	<p>“My long-term research vision is to contain, control and mitigate antimicrobial resistance by developing technologies that can be easily translated to future antimicrobial products. This fellowship will help me to leverage my skills in my STEMM discipline to accomplish my research vision through expert mentorship; training in a high-quality and supportive environment; and networking opportunities for strong internal and external collaboration.”</p>

Table 12: Qualitative feedback from Vice-Chancellor’s Women in STEMM Postdoctoral Fellows.

Qualitative data was not sought from staff across the work areas the postdoctoral fellows were recruited to, due to limited resourcing/capacity; however, such data should be collected in the future to gauge how these kinds of initiatives impact other STEMM staff and the overall culture in STEMM disciplines.

## Women in STEMM Sessions: Qualitative insights

A survey to gather feedback on the Women in STEMM Sessions was distributed in Q4 2023 to the 96 individuals (primarily women in STEMM staff) registered to receive contact about the Sessions. Seven responses were received, with feedback highlighting that participants found value in a wide range of elements, including the discussions, networking opportunities, information and tools shared, capacity building, and access to mentors and role models (Table 13). Several respondents indicated they felt the online format of the majority of sessions to be impersonal and unsupportive of collaborative discussions; however, others noted the online sessions were more accessible than on-campus. A mix of on-campus and online sessions should be delivered in the future to meet different staff needs.

<b><u>What worked well / positive feedback</u></b>	
<b>Responses to survey questions:</b>	
<ul style="list-style-type: none"> <li>• “What has worked well in the Women in STEMM Sessions you have attended?”</li> <li>• “How do the Women in STEMM Sessions support you in your career (if at all)?”</li> <li>• “Any other comments or feedback?”</li> </ul>	
<b>Participant 1</b>	“Range of topics discussed.”
<b>Participant 2</b>	“Discussions.” “Thank you for running these sessions and raising awareness of Women working in STEMM.”
<b>Participant 3</b>	“Personal anecdotes and experiences.”
<b>Participant 4</b>	“Information shared and networking opportunity.” “It provided me with insight into expanding my research interest and how to transfer the research skills gained in one area.”
<b>Participant 5</b>	“In person, lunch provided, opportunities to network and catch up face to face / interesting speakers/topics / positive energy and encouragement.” “Support, encouragement, mentors, new ideas, role models.”
<b>Participant 6</b>	“Online delivery to accommodate different campus staff.” “Capacity building.”
<b>Participant 7</b>	“The support provided by the Women in STEMM session has been wonderful. The sessions made me feel like we were being empowered to succeed!!” “The sessions provided me with a myriad of useful leadership tools and helped me to apply for a promotion.”
<b>Participant 8</b>	“I only attended the last session (30/11) and found the range of speakers fascinating and really enlightening.” “I think creating a sense of community and togetherness allows me, as a woman in STEMM, to feel supported and informed.”
<b><u>What did not work well / 'room for improvement' feedback</u></b>	
<b>Responses to survey questions:</b>	
<ul style="list-style-type: none"> <li>• “What have you <i>not</i> liked about the Women in STEMM Sessions you have attended?”</li> </ul>	
<b>Participant 1</b>	“Online format hasn't felt very friendly or inviting. Can see people are feeling awkward and not speaking up.”
<b>Participant 2</b>	“Lack of interaction amongst participants in the online mode. Realise that's been difficult during COVID, but hopefully we could try an in-person session.”

<b>Participant 3</b>	"Nothing - only attended one."
<b>Participant 4</b>	"Nil."
<b>Participant 6</b>	"Sessions in Toowoomba, when I'm in Ipswich and can't go if I remember correctly."
<b>Participant 7</b>	"N/A."
<b>Participant 8</b>	"In my session there was an individual who was constantly commenting in the chat during the speakers presentations and derailing things, being quite inappropriate at times and generally detracting from the focus of the session. It would have been great for that person to be asked to tone down their input and allow the speakers to have their moment."
<b><u>Suggestions for future topics and improvement</u></b>	
<b>Responses to survey questions:</b>	
<ul style="list-style-type: none"> <li>• "What kinds of topics would you like to see covered in future Women in STEMM Sessions?"</li> <li>• "How can the Women in STEMM Sessions be improved?"</li> </ul>	
<b>Participant 1</b>	"General discussions on issues that women working in STEM face."  "In person sessions at the different campuses would be useful to help make it more friendly and inviting. The online sessions have not encouraged people to speak up. Getting better speakers - role models of successful women working in STEM, including outside USQ"
<b>Participant 2</b>	"Presentations from role models - Women working in STEMM from other Universities."  "Greater interaction amongst the women working in STEMM would be great."
<b>Participant 3</b>	"Time management with families?"  "In person."
<b>Participant 4</b>	"Collaboration opportunities / Challenges and barriers experienced by women engaged in STEM subjects and how to overcome them."  "Improve on the participation."
<b>Participant 5</b>	"How to build teams for cat 1 funding."
<b>Participant 6</b>	"Academic promotion, smaller external grant opportunities (not just NHMRC/ARC), leadership."  "More online, less on campus. I can appreciate the networking opportunities though to be in-person. Perhaps in-person sessions can also be online."
<b>Participant 7</b>	"Applying for promotion, leadership workshops, the gender gap between women and men in academia."
<b>Participant 8</b>	"More presentations from individuals about their journeys and challenges."

Table 13: Qualitative feedback from Women in STEMM Session attendees.

## SAGE Events: Qualitative insights

Feedback collected via email and survey on the SAGE events held 2021-2023 was overwhelmingly positive, with attendees of these events remarking on their value as opportunities to come together with fellow staff and hear from leaders and role models at the University about issues of diversity and inclusion. Unfortunately, no formal feedback was gathered following *The Leadership* film screening, but feedback and data was collected following the SAGE Roadshow via a survey sent to the 140 staff members who RSVP'd to attend. 23 responses were received (74% female), with feedback indicating attendees found the events engaging and informative (Table 14) and became more familiar with the SAGE program following the event (improving general awareness across the University; Figure 1, Figure 2).

		SAGE Roadshow Attendee	General feedback on SAGE Roadshow Experience received via email
STEMM	F	Attendee #9	"I would like to see a presentation about how the SAGE program changed women's lives rather than some presentations on specific areas like concrete development."
		Attendee #10	"Was disconcerting to see men at the SAGE function. Would be great to have a function for women only. A safe space just for women in STEM."
		Attendee #18	"Thank you for organising the Roadshow! The speakers were engaging and it was a great way to learn more about the SAGE program."
	M	Attendee #6	"Thank you for running an excellent SAGE program at UniSQ."
		Attendee #7	"Keep up the good work."
Non-STEMM	F	Attendee #20	"Would be great to see something next year from the perspective of professional staff working in this area. It was very academic centric. Maybe also look at featuring a HDR student next year."
		Attendee #21	"Great presentations. Very informative. Great to hear the academic and personal journeys of some of the guiding lights in STEMM areas at UniSQ."
	M	Attendee #8	"I liked the format of the event and appreciated hearing from the guest speakers. It would be great to see more men attend these events. Well done on the event and the progress being made."

Table 14: Qualitative feedback from SAGE Roadshow attendees (1).

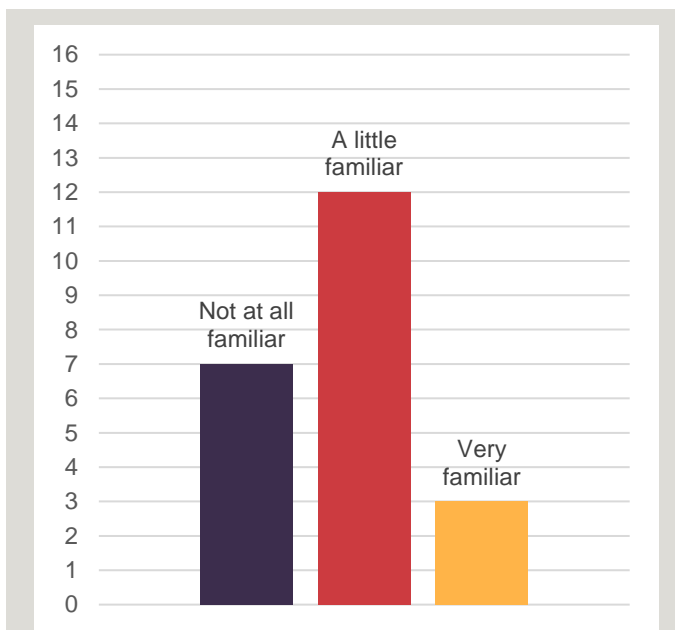


Figure 1: SAGE Roadshow attendee ratings of their familiarity with the SAGE program before attending the SAGE Roadshow.

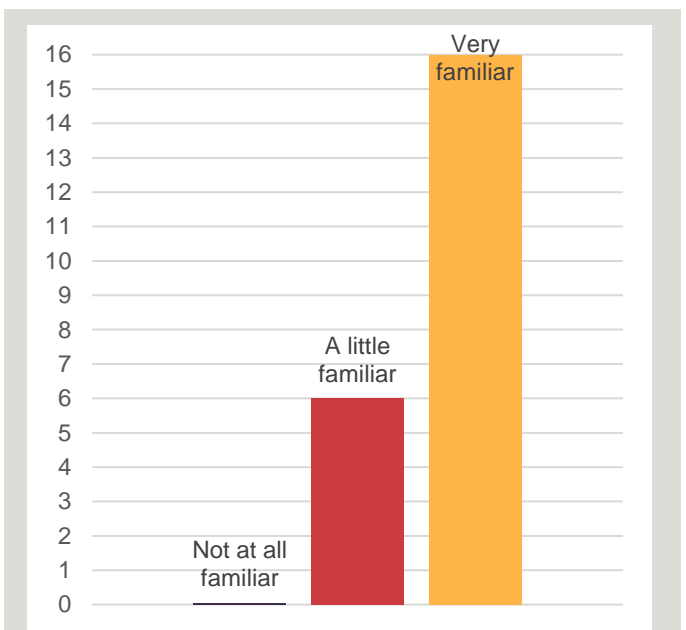


Figure 2: SAGE Roadshow attendee ratings of their familiarity with the SAGE program after attending the SAGE Roadshow.

Feedback on what the SAGE program should focus on in future centred on some key themes (Table 15):

- Events/presentations spotlighting women in STEMM leaders and role models
- Initiatives to support CALD women (both HDR students and staff)
- Initiatives to support professional staff working in STEMM areas
- Buy-in/prioritisation of diversity and inclusion matters from leaders and executives

		Response to “What kind of diversity and inclusion issues would you like to see the SAGE program focus on in the future?”	
STEMM	F	Attendee #2	“More lunches with presentations and networking; it was so beneficial and a welcome return to face to face events post covid.”
		Attendee #9	“Women from different nations.”
		Attendee #10	“More women in leadership roles, especially in STEM. Not many female role models.”
		Attendee #16	“Empowering Women through talks like those held at the SAGE roadshow - this was fantastic and I learnt a lot about SAGE! Super inspiring women who have done amazing things.”
		Attendee #18	“If it is in scope of the SAGE program, it would be good to target some communications/initiatives at professional staff roles working in STEMM areas outside the AA and R&I Divisions (for example ICT).”
		Attendee #19	“Leadership (i.e., there continues to be subtle forms of gender-bias in leadership).”
	M	Attendee #6	“I think that our university is doing well in this arena but possible issues to focus on are (1) giving more of a Voice at UniSQ to Australia's first peoples if the national referendum fails and (2) helping international HDR students cope with Australia's approach to HDR supervision - which is more equable and less directed than in some nations but with a greater expectation of self-directed study. This cultural issue may be more acute for female students coming from some countries.”
Non-STEMM	F	Attendee #20	“Would be great to see something next year from the perspective of professional staff working in this area. It was very academic centric. Maybe also look at featuring a HDR student next year.”
		Attendee #22	“Whatever we need to do to move beyond the Bronze award.”
	M	Attendee #8	<ul style="list-style-type: none"> <li>• “Promoting positive duty to prevent everyday sex-based harassment and discrimination</li> <li>• Less HR initiatives and more initiatives from the across the organisation</li> <li>• Getting executive leaders on board and showing more action”</li> </ul>

Table 15: Qualitative feedback from SAGE Roadshow attendees (2).

## Further actions

Reference	Rationale/Evidence	Actions & Outputs	Timeframe (start & end)	Person/Group responsible for implementing action	Senior Leader accountable for action delivery	Desired Outcomes/Targets/Success Indicators
1	Data and feedback highlight the positive impact of the SAGE scholarships on recipients' confidence and capacity to complete doctoral studies.	Rebrand and deliver the SAGE scholarship program annually as a women in STEMM-specific scholarship program.	Annual	Graduate Research School	DVC (R&I)	<ul style="list-style-type: none"> <li>Improvements in gender balance of doctoral study completions in STEMM disciplines year-on-year.</li> </ul>
2	Data and feedback highlight the positive impact of the Doctoral Support Program on participants' capacity to complete doctoral studies and progress in their academic career.	Continue delivery of the Doctoral Support Program annually and identify several positions for diversity cohorts.	Annual	People Portfolio	CPO	<ul style="list-style-type: none"> <li>Improvements in gender balance of doctoral study completions in STEMM disciplines year-on-year.</li> </ul>
3	Data indicates that recruitment to a number of gender-specified positions annually supports improvements in the gender balance of UniSQ's academic STEMM staff.  Data and feedback highlights the program has a positive impact on appointees' confidence and capacity as women in STEMM role models.	Implement an ongoing postdoctoral fellowship for women in STEMM program to support the recruitment of a number of gender-identified academic positions to STEMM work areas annually.	Annual	Office of the DVC (R&I)	DVC (R&I)	<ul style="list-style-type: none"> <li>Improvements in gender balance of academic STEMM staff year-on-year.</li> </ul>
4	Data indicates that female representation in the School of Mathematics, Physics and Computing has reduced between 2018 and 2023.	Analyse staff data and conduct focus groups with staff in the School of Mathematics, Physics and Computing to identify opportunities for increasing female representation in the School.	Q1 2025 – Q2 2025	Academic Affairs Portfolio  People Portfolio	DVC (AA)  CPO	<ul style="list-style-type: none"> <li>Development and implementation of relevant initiatives to increase female academic staff representation in the School of Mathematics, Physics and Computing.</li> </ul>
5	There is a lack of data investigating how initiatives that directly hire women into STEMM disciplines impacts other STEMM staff and changes the culture in STEMM disciplines.	Design and deliver an ongoing evaluative mechanism to gauge cultural changes in STEMM departments where women-only recruitment initiatives are in place.	Annual	People Portfolio	CPO	<ul style="list-style-type: none"> <li>Improvements in staff satisfaction with STEMM work area culture over time.</li> </ul>



6	Feedback highlights the positive impact of the Women in STEMM Sessions and indicates they should be made more accessible to staff across campuses.	Deliver the Women in STEMM Sessions as both online and roving on-campus workshops.	Annual	Office of the DVC (R&I) Academic Affairs Portfolio	DVC (R&I) DVC (AA)	<ul style="list-style-type: none"> <li>Continued uptake of Women in STEMM Sessions year-on-year from female STEMM academics.</li> <li>Improved staff satisfaction ratings from women in STEMM.</li> </ul>
7	Feedback highlights University staff would like to see more diversity and inclusion initiatives aimed at professional staff working in STEMM areas.	Conduct focus groups with professional STEMM staff to identify opportunities for future diversity and inclusion initiatives.	Q1 2025 – Q2 2025	Office of the DVC (R&I) Academic Affairs Portfolio	DVC (R&I) DVC (AA)	<ul style="list-style-type: none"> <li>Development and implementation of relevant diversity and inclusion initiatives targeting professional STEMM staff.</li> </ul>
8	Feedback suggests University staff would like to see more engagement from leaders and executives with diversity and inclusion issues and priorities.	Build diversity and inclusion KPIs into executive leaders' performance planning and review cycles.	Bi-annual	People Portfolio	CPO	<ul style="list-style-type: none"> <li>Executive leaders' PPR documentation includes reference to their diversity and inclusion goals and engagement.</li> <li>Improved staff satisfaction ratings from University staff.</li> </ul>
9	Data indicates that the gender imbalance of research-focused academic staff at level E is an ongoing, pervasive issue.	Implement schemes to support the direct recruitment and promotion of research-only female STEMM academics to level E.	Annual	Office of the DVC (R&I)	DVC (R&I)	<ul style="list-style-type: none"> <li>Improvements in gender balance of research-only STEMM academics at level E year-on-year.</li> </ul>

# Appendices

## Appendix 1

		2018						2019						2020						Total HC	Total %
		F		M		X		F		M		X		F		M		X			
Academic level		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
STEMM	Level A	4	57%	3	43%	0	0%	10	56%	8	44%	0	0%	13	62%	8	38%	0	0%	46	2%
	Level B	69	52%	63	48%	0	0%	74	56%	59	44%	0	0%	84	54%	71	46%	0	0%	420	23%
	Level C	38	42%	53	58%	0	0%	37	40%	55	60%	0	0%	37	45%	46	55%	0	0%	266	14%
	Level D	8	20%	32	80%	0	0%	9	26%	26	74%	0	0%	11	26%	31	74%	0	0%	117	6%
	Level E	2	6%	29	94%	0	0%	3	8%	36	92%	0	0%	6	13%	40	87%	0	0%	116	6%
	Unknown	2	14%	12	86%	0	0%	3	21%	11	79%	0	0%	3	21%	11	79%	0	0%	42	2%
Non-STEMM	Level A	13	52%	11	44%	<6	4%	13	50%	13	50%	0	0%	13	54%	11	46%	0	0%	75	4%
	Level B	79	62%	48	38%	0	0%	67	60%	44	39%	<6	1%	71	58%	50	41%	<6	1%	361	19%
	Level C	39	53%	34	47%	0	0%	36	53%	32	47%	0	0%	34	56%	27	44%	0	0%	202	11%
	Level D	20	69%	9	31%	0	0%	22	69%	10	31%	0	0%	19	59%	13	41%	0	0%	93	5%
	Level E	7	41%	10	59%	0	0%	7	35%	13	65%	0	0%	11	52%	10	48%	0	0%	58	3%
	Unknown	7	35%	13	65%	0	0%	10	53%	9	47%	0	0%	9	50%	9	50%	0	0%	57	3%
<b>STEMM Total</b>		123	39%	192	61%	0	0%	136	41%	195	59%	0	0%	154	43%	207	57%	0	0%	1007	54%
<b>Non-STEMM Total</b>		165	57%	125	43%	<6%	<1%	155	56%	121	44%	<6	<1%	157	56%	120	43%	<6	<1%	846	46%
<b>Total</b>		288	48%	317	52%	<6%	<1%	291	48%	316	52%	<6	<1%	311	49%	327	51%	<6	<1%	1853	100%

Academic staff distribution 2018-2020.

Note: HC = Head count. % = % of cohort at same level in same year.

## Appendix 2

		2018				2019				2020				Total HC	Total %
Academic Level		F		M		F		M		F		M			
		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
Teaching Specialist	Level A	0	0%	0	0%	7	78%	2	22%	6	75%	2	25%	17	18%
	Level B	16	80%	4	20%	19	83%	4	17%	22	79%	6	21%	71	76%
	Level C	1	50%	1	50%	0	0%	1	100%	1	100%	0	0%	4	4%
	Level D	0	0%	0	0%	1	100%	0	0%	1	100%	0	0%	2	2%
	Level E	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Teaching and Research	Level A	1	100%	0	0%	1	50%	1	50%	4	80%	1	20%	8	1%
	Level B	36	49%	38	51%	37	52%	34	48%	41	50%	41	50%	227	35%
	Level C	33	43%	43	57%	31	44%	45	63%	31	44%	40	56%	223	35%
	Level D	6	21%	22	79%	8	30%	19	70%	9	27%	24	73%	88	14%
	Level E	2	10%	19	90%	2	8%	23	92%	5	16%	27	84%	78	12%
	Other /Unknown	2	40%	3	60%	3	50%	3	50%	3	43%	4	57%	18	3%
Research Specialist	Level A	3	50%	3	50%	2	29%	5	71%	3	38%	5	63%	21	8%
	Level B	17	45%	21	55%	18	46%	21	54%	18	45%	22	55%	117	46%
	Level C	4	31%	9	69%	6	40%	9	60%	5	45%	6	55%	39	15%
	Level D	2	17%	10	83%	0	0%	7	100%	1	13%	7	88%	27	11%
	Level E	0	0%	10	100%	1	7%	13	93%	1	7%	13	93%	38	15%
	Other /Unknown	0	0%	9	100%	0	0%	8	100%	0	0%	7	100%	24	9%
Other /Unknown	B	0	0%	0	0%	0	0%	0	0%	3	60%	2	40%	5	100%
<b>TS Total</b>		17	77%	5	23%	27	79%	7	21%	30	79%	8	21%	94	9%
<b>T&amp;R Total</b>		80	39%	125	61%	82	40%	125	60%	93	40%	137	60%	642	64%
<b>RS Total</b>		26	30%	62	70%	27	30%	63	70%	28	32%	60	68%	266	26%
<b>Unknown Total</b>		0	0%	0	0%	0	0%	0	0%	3	60%	2	40%	5	<1%
<b>Total</b>		123	39%	192	61%	136	41%	195	59%	154	43%	207	57%	1007	100%

Academic STEM staff distribution by function 2018-2020.

Note: HC = Head count. % = % of cohort at same level performing same function in same year.

## Appendix 3

		2018				2019				2020				Total HC	Total %
School/Institute /Centre		F		M		F		M		F		M			
		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
Teaching Specialist	S. of Business	0	0%	0	0%	0	0%	1	100%	0	0%	1	100%	2	2%
	S. of Engineering	0	0%	2	100%	0	0%	3	100%	0	0%	2	100%	7	7%
	S. of Health and Med. Sci.	3	75%	1	25%	3	75%	1	25%	3	75%	1	25%	12	13%
	S. of Math., Physics and Comp.	0	0%	1	100%	2	50%	2	50%	0	0%	1	100%	6	6%
	S. of Nursing and Midwif.	12	100%	0	0%	18	100%	0	0%	19	100%	0	0%	49	52%
	S. of Psych. and Wellbeing	1	100%	0	0%	3	100%	0	0%	7	70%	3	30%	14	15%
	S. of Surveying and Built Envir.	1	50%	1	50%	1	100%	0	0%	1	100%	0	0%	4	4%
Teaching and Research	Research Institutes /Centres	0	0%	1	100%	0	0%	2	100%	1	33%	2	67%	6	1%
	S. of Business	4	22%	14	78%	3	20%	12	80%	6	32%	13	68%	52	8%
	S. of Engineering	1	4%	27	96%	2	7%	26	93%	2	6%	29	94%	87	14%
	S. of Health and Med. Sci.	10	50%	10	50%	9	47%	10	53%	15	56%	12	44%	66	10%
	S. of Math., Physics and Comp.	11	29%	27	71%	12	30%	28	70%	12	26%	34	74%	124	19%
	S. of Nursing and Midwif.	23	74%	4	15%	27	82%	6	18%	27	84%	5	15%	92	14%
	S. of Psych. and Wellbeing	21	64%	12	36%	18	58%	13	42%	19	58%	14	42%	97	15%
	S. of Surveying and Built Envir.	9	24%	29	76%	10	27%	27	73%	10	27%	27	73%	112	17%
	Other/Unknown	1	50%	1	50%	1	50%	1	50%	1	50%	1	50%	6	1%
Research Specialist	Research Institutes /Centres	26	30%	62	70%	27	30%	63	70%	28	32%	60	68%	266	100%
Other /Unknown	Other/Unknown	0	0%	0	0%	0	0%	0	0%	3	60%	2	40%	5	100%
<b>TS Total</b>		17	77%	5	23%	27	79%	7	21%	30	79%	8	21%	94	9%
<b>T&amp;R Total</b>		80	39%	125	61%	82	40%	125	60%	93	40%	137	60%	642	64%
<b>RS Total</b>		26	30%	62	70%	27	30%	63	70%	28	32%	60	68%	266	26%
<b>Unknown Total</b>		0	0%	0	0%	0	0%	0	0%	3	60%	2	40%	5	<1%
<b>Total</b>		123	39%	192	61%	136	41%	195	59%	154	43%	207	57%	1007	100%

Academic STEMM staff distribution by function and work area 2018-2020.

Note: HC = Head count. % = % of cohort performing same function in same work area in same year.

## Appendix 4

		2021						2022						2023						Total HC	Total %
		F		M		X		F		M		X		F		M		X			
Academic level		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
STEMM	Level A	15	63%	9	38%	0	0%	18	64%	10	36%	0	0%	14	52%	13	48%	0	0%	79	4%
	Level B	66	53%	59	47%	0	0%	70	57%	52	43%	0	0%	93	57%	70	43%	0	0%	410	22%
	Level C	40	43%	52	57%	0	0%	34	39%	53	61%	0	0%	35	38%	56	62%	0	0%	270	15%
	Level D	13	30%	30	70%	0	0%	16	31%	35	69%	0	0%	20	34%	38	66%	0	0%	152	8%
	Level E	8	18%	36	82%	0	0%	9	22%	32	78%	0	0%	12	23%	41	77%	0	0%	138	8%
	Unknown	1	13%	7	88%	0	0%	1	13%	7	88%	0	0%	5	36%	9	64%	0	0%	30	2%
Non-STEMM	Level A	9	45%	11	55%	0	0%	7	64%	4	36%	0	0%	5	56%	4	44%	0	0%	40	2%
	Level B	62	61%	39	38%	<6	1%	49	59%	33	40%	<6	1%	46	56%	35	42%	<6	1%	618	34%
	Level C	42	61%	27	39%	0	0%	41	59%	29	41%	0	0%	41	59%	28	41%	0	0%	208	11%
	Level D	19	58%	14	42%	0	0%	15	50%	15	50%	0	0%	16	53%	14	47%	0	0%	93	5%
	Level E	15	52%	14	48%	0	0%	22	56%	17	44%	0	0%	22	59%	15	41%	0	0%	105	6%
	Unknown	4	36%	7	64%	0	0%	3	30%	7	70%	0	0%	4	29%	10	71%	0	0%	35	2%
<b>STEMM Total</b>		143	43%	193	57%	0	0%	148	44%	189	56%	0	%	179	44%	227	56%	0	0%	1079	59%
<b>Non-STEMM Total</b>		151	57%	112	42%	<6	<1%	137	56%	105	43%	<6	<1%	134	56%	106	44%	<6	<1%	748	41%
<b>Total</b>		294	49%	305	51%	<6	<1%	285	49%	294	51%	<6	<1%	313	48%	333	51%	<6	<1%	1827	100%

Academic staff distribution 2021-2023.

Note: HC = Head count. % = % of cohort at same level in same year.

## Appendix 5

		2021				2022				2023				Total HC	Total %
Academic Level		F		M		F		M		F		M			
		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
Teaching Specialist	Level A	4	100%	0	0%	5	100%	0	0%	6	75%	2	25%	17	2%
	Level B	13	81%	3	19%	15	79%	4	21%	14	74%	5	26%	54	5%
	Level C	3	100%	0	0%	2	67%	1	33%	3	100%	0	0%	9	1%
	Level D	1	100%	0	0%	0	0%	1	100%	0	0%	0	0%	2	<1%
	Level E	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Teaching and Research	Level A	5	83%	1	17%	3	75%	1	25%	1	33%	2	67%	13	1%
	Level B	42	53%	37	47%	44	61%	28	39%	62	60%	42	40%	255	24%
	Level C	29	40%	44	60%	25	36%	44	64%	27	38%	44	62%	213	20%
	Level D	11	30%	26	70%	15	33%	31	67%	17	33%	34	67%	134	12%
	Level E	7	21%	27	79%	8	24%	25	76%	12	27%	33	73%	112	10%
	Other /Unknown	1	50%	1	50%	1	33%	2	67%	2	40%	3	60%	10	1%
Research Specialist	Level A	6	43%	8	57%	10	53%	9	47%	7	44%	9	56%	49	5%
	Level B	11	37%	19	63%	11	35%	20	65%	17	43%	23	57%	101	9%
	Level C	8	50%	8	50%	7	47%	8	53%	5	29%	12	71%	48	4%
	Level D	1	20%	4	80%	1	33%	2	67%	3	43%	4	57%	15	1%
	Level E	1	10%	9	90%	0	0%	6	100%	0	0%	7	100%	23	2%
	Other /Unknown	0	0%	5	100%	0	0%	4	100%	1	20%	4	80%	14	1%
Other /Unknown	Other/Unknown	0	0%	1	100%	1	25%	3	75%	2	40%	3	60%	10	1%
<b>TS Total</b>		21	88%	3	13%	22	79%	6	21%	23	77%	7	23%	82	8%
<b>T&amp;R Total</b>		95	41%	136	59%	96	42%	131	58%	121	43%	158	57%	737	68%
<b>RS Total</b>		27	34%	53	66%	29	37%	49	63%	33	36%	59	64%	250	23%
<b>Other/Unknown Total</b>		0	0%	1	100%	1	25%	3	75%	2	40%	3	60%	10	1%
<b>Total</b>		143	43%	193	57%	148	44%	189	56%	179	44%	227	56%	1079	100%

Academic STEMM staff distribution by function 2021-2023.

Note: HC = Head count. % = % of cohort at same level performing same function in same year.

## Appendix 6

		2021				2022				2023				Total HC	Total %
School/Institute /Centre		F		M		F		M		F		M			
		HC	%	HC	%	HC	%	HC	%	HC	%	HC	%		
Teaching Specialist	S. of Agri. and Envir. Sci.	-	-	-	-	-	-	-	-	1	100%	0	0%	1	<1%
	S. of Business	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	S. of Engineering	0	0%	1	100%	1	100%	0	0%	0	0%	1	100%	3	<1%
	S. of Health and Med. Sci.	4	80%	1	20%	3	60%	2	40%	5	83%	1	17%	16	1%
	S. of Math., Physics and Comp.	0	0%	1	100%	0	0%	1	100%	0	0%	2	100%	4	<1%
	S. of Nursing and Midwif.	9	100%	0	0%	8	100%	0	0%	6	100%	0	0%	23	2%
	S. of Psych. and Wellbeing	7	100%	0	0%	8	80%	2	20%	8	80%	2	20%	27	3%
	S. of Surveying and Built Envir.	1	100%	0	0%	1	50%	1	50%	1	50%	1	50%	5	<1%
	Other/Unknown	0	0%	0	0%	1	100%	0	0%	2	100%	0	0%	3	<1%
Teaching and Research	Research Institutes /Centres	0	0%	6	100%	1	25%	3	75%	2	50%	2	50%	14	1%
	S. of Agri. and Envir. Sci.	0	0%	0	0%	11	44%	14	56%	12	48%	13	52%	50	5%
	S. of Business	7	35%	13	65%	5	31%	11	69%	6	30%	14	70%	56	5%
	S. of Engineering	2	6%	29	94%	4	9%	40	91%	5	9%	48	91%	128	12%
	S. of Health and Med. Sci.	15	50%	15	50%	14	45%	17	55%	24	55%	20	45%	105	10%
	S. of Math., Physics and Comp.	13	29%	32	71%	7	23%	23	77%	7	21%	27	79%	109	10%
	S. of Nursing and Midwif.	34	96%	2	6%	34	94%	2	6%	35	88%	5	13%	112	10%
	S. of Psych. and Wellbeing	14	58%	10	42%	13	59%	9	41%	22	67%	11	33%	79	7%
	S. of Surveying and Built Envir.	8	22%	28	78%	5	29%	12	71%	5	26%	14	74%	72	7%
	Other/Unknown	2	67%	1	33%	2	100%	0	0%	3	43%	4	57%	12	1%
Research Specialist	Research Institutes /Centres	27	34%	53	66%	29	37%	49	63%	33	36%	59	64%	250	23%
Other /Unknown	Other/Unknown	0	0%	1	100%	1	25%	3	75%	2	40%	3	60%	10	1%
<b>TS Total</b>		21	88%	3	13%	22	79%	6	21%	23	77%	7	23%	82	8%
<b>T&amp;R Total</b>		95	41%	136	59%	96	42%	131	58%	121	43%	158	57%	737	68%
<b>RS Total</b>		27	34%	53	66%	29	37%	49	63%	33	36%	59	64%	250	23%



<b>Other/Unknown Total</b>	0	0%	1	100%	1	25%	3	75%	2	40%	3	60%	10	1%
<b>Total</b>	143	43%	193	57%	148	44%	189	56%	179	44%	227	56%	1079	100%

Academic STEMM staff distribution by function and work area 2021-2023.

Note: HC = Head count. % = % of cohort performing same function in same work area in same year.  
 School of Agriculture and Environmental Science established mid-2022.





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