



2021



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# UNSW Science EDI Annual Report

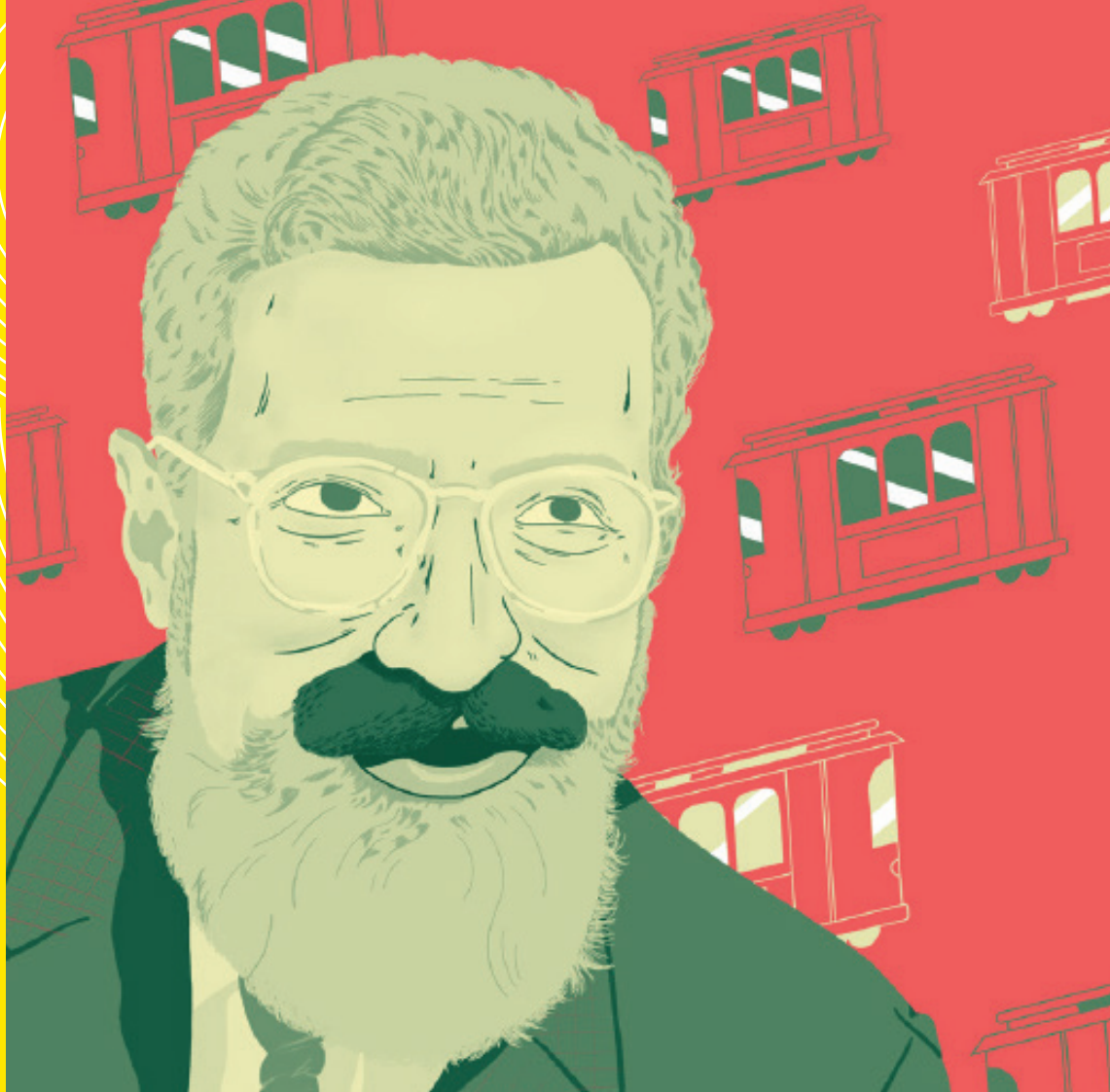
Illustrations in this report are taken from the 2021 student-led Science History Trail Project, a project highlighting the stories of diverse scientists often not included in traditional science history. Read more about this project on pg 12 of this report and access the project biographies and illustrations [here](#).



## UNSW Science: Our EDI Vision

UNSW Science aims to provide an equitable place of work and study that will stimulate innovation, productivity, and progress. We believe diversity and inclusion are essential to our success, helping to produce robust, credible, and pioneering science of global impact and train the next generation of scientists. We're committed to reducing barriers that impede equity, diversity and inclusion via initiatives that will benefit both staff and students.

# 2021 Summary



With this vision in mind, in 2021 our Science Equity, Diversity, and Inclusion team focused on two strategy items which included creating student-led community building initiatives with a focus on reinvigorating campus life and delivering cultural and operational changes considering the ongoing COVID-19 pandemic with a focus on inclusion, accessibility, and sustainability.

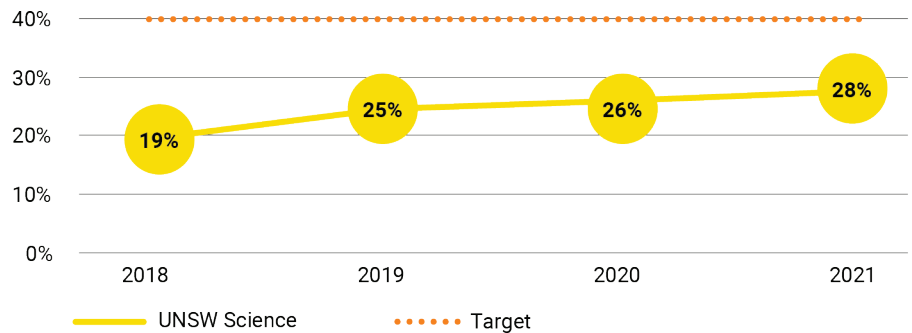
In addition, the EDI team progressed towards our key performance indicators (KPIs) of increasing the rate of domestic undergraduate students from low socioeconomic status (LSES) backgrounds to UNSW Science (goal: 12%) and increasing the representation of academic women at Levels D and above (goal: 40%).

# Faculty Snapshot



Here we present a snapshot of the current and historical position of the Faculty as it relates to two parameters: representation of women among academic staff Levels D and above and LSES student access rate. These two parameters correspond to two KPIs set out in the UNSW 2025 Strategy.

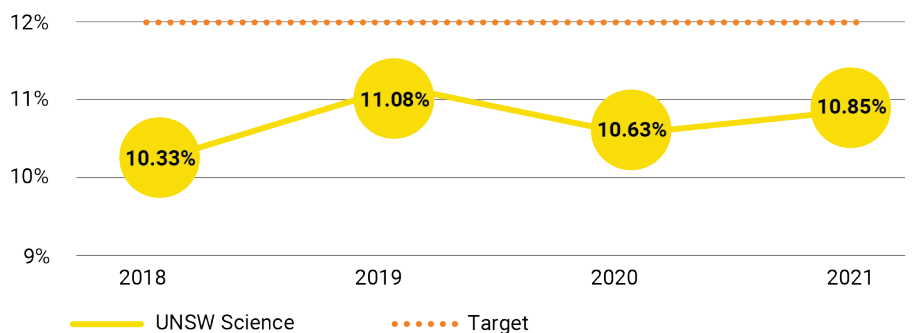
## Representation of Women Among Academic Staff Levels D and Above



Notes:

- Faculty KPI: The Faculty of Science commits to increasing the representation of academic women in Levels D and above to 40%.
- Parameter definition: This parameter is defined as the proportion of academic staff at Level D and above, including TRP, that are female as of 1 January of the year immediately following the reportable year.
- Data source: HR Quarterly Gender Reporting dashboard as of October 2021.

## LSES Student Access Rate



Notes:

- Faculty KPI: The Faculty of Science commits to increasing the rate of access of domestic undergraduate students from low-SES backgrounds to UNSW Science to 12%.
- Parameter definition: This access rate is defined as the number of domestic undergraduate students from low SES areas commencing during the calendar year divided by all domestic students having a valid SES and who are commencing during the calendar year.
- Data Source: University Planning and Performance (UPP) dashboard, using SES as recorded in UPP.

# Faculty Projects

## EDI Awareness and Events

### Inclusive Science Series

The Inclusive Science Series is designed to increase awareness of the importance of inclusive science, research, education, and policies in our community. These events are curated to showcase best practice approaches to partnership, visibility, and representation in science, reflecting our belief that diversity and inclusion are essential to our success in helping to produce the next generation of robust, credible, and pioneering science.

In 2021, we held three events:

#### 1. "The Leadership" Panel Discussion March 8, 2021

This event was designed to encourage reflection on *The Leadership* – a documentary film about the experiences of women who participated in the inaugural Homeward Bound Project in Antarctica and the systemic inequities they face as women in STEMM. The panel (Professor Sarah Brough, Ms Isabelle Kingsley, Dr Fatemeh Vafaee, Dr Steph Gardner, & Professor Dane McCamey) unpacked the major themes of the film and discussed the challenges and rewards of implementing practices of inclusive science.

This event was attended by 81 people and received 410 post-event views. The event also received overall positive feedback with 78% of respondents reporting that the event topic was at least very good and 87% indicating they would be likely to register for another Inclusive Science Series event in the future.

A recording of the event can be accessed [here](#).



## 2. Women in Leadership Seminar

September 22, 2021

This seminar focused on highlighting strategies for increasing the representation of women in senior leadership roles. The event featured three speakers: ANU Professor Lisa Kewley, Professor Lisa Stapleton, and Associate Professor Lisa Williams. Each speaker shared their experience with initiatives seeking gender equity in Science disciplines. The talks were followed by a Q&A session

This event was attended by 79 people and received 292 post-event views. The event also received overall positive feedback with 88% of respondents reporting that the event topic was at least very good and 87% indicating they would be likely to register for another Inclusive Science Series event in the future.

A recording of the event can be accessed [here](#).



## 3. Science History Trail Showcase

28 October, 2021

This event, part of the 2021 [UNSW Diversity Fest](#), featured the outcomes of the Science History Trail project, a project focused on highlighting the stories of diverse scientists often not included in traditional science history (see pg 12 for more details on this project). The event featured current UNSW Science Students as they told the stories of their science role models and reflected on the importance of inclusive representation in science.

The event was attended by 21 people and received 124 post-event views. The event also received overall positive feedback with 100% of respondents reporting that the event topic was at least very good and 67% indicating they would be likely to register for another Inclusive Science Series event in the future.

A recording of the event can be accessed [here](#).

## Student-Led Inclusive Science Series

In 2021, we launched the Student-Led Inclusive Science Series, a variation of our Inclusive Science Series initiative. This Series was designed as a student-led initiative, consistent with our 2021 Strategic projects.

In 2021, one event was held:

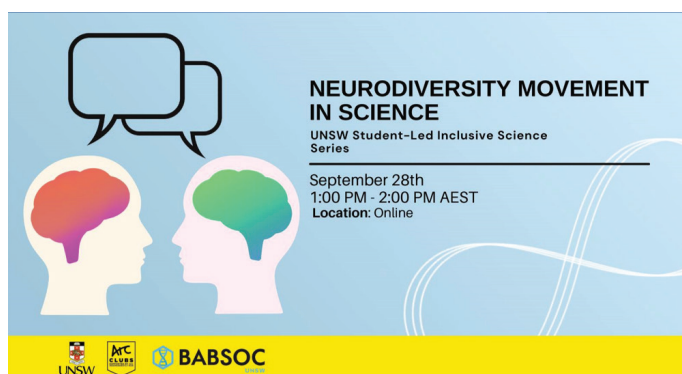
### Neurodiversity Movement in Science

28 September 2021

This event aimed to amplify student voices and provide a platform for students to discuss the intersection of EDI and Science, with the aim of increasing awareness and understanding of neurodiversity. The event was organised by members of BABSOC (the student society of the School of Biotechnology and Biomolecular Sciences). The panel, featuring Ms Isabelle Vertucci, Professor Samuel Arnold, Mr Aaron Bugge, and Professor Irina Voineagu, highlighted the need for better representation and visibility of neurodiversity in science and discussed the distinct value of neurodiversity. The panellists initiated important conversations on how we can better support students and staff with neurodiversity by working towards fostering an inclusive and accepting science community that is safe, accessible, and encouraging of participation to all.

This was attended by 35 people and received 157 post-event views. The event also received overall positive feedback with 100% of respondents indicating they were at least satisfied with the event and 75% indicating they would be likely to register for another Inclusive Science Series event in the future.

A recording of the event can be accessed [here](#).



## Closed Captioning and Transcripts

In an effort to make our EDI resources more accessible and to model inclusion principles we advocate in our [Inclusive Online Learning Guidelines](#), we engaged a professional service to add closed captioning and transcripts to the entire suite of Inclusive Science Series recordings, including those run in 2020.

## ExpEDlte

ExpEDlte: The Science Equity, Diversity, and Inclusion Roundup is a monthly newsletter collated by the Science EDI Team which aims to educate our community on recent coverage of EDI topics in the realms of Science, STEM, and higher education. The newsletter also includes recent academic work relevant to EDI efforts in Science. In 2021, 11 editions were mailed out to 133 subscribers. UNSW staff and students can subscribe to ExpEDlte [here](#).



## NRL Indigenous Youth Leadership Summit

Every year, the National Rugby League (NRL) organises a Youth Leadership Summit for Aboriginal and Torres Strait Islander students from across Australia. In 2021 UNSW collaborated with Nura Gili and the NRL to welcome 64 Year 11 students on campus for a university experience day. The Faculty of Science was excited to offer two outreach sessions including a flower dissection lab in the School of Biological, Earth, and Environmental Sciences and the opportunity to engage with the flight simulator in the School of Aviation.

## Cultural Capability Training Opportunity: AIATSIS

In 2021, we offered all staff and students in the Faculty the opportunity to engage in an online cultural learning course called [Core](#). Core is an online program developed by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) and is intended to create a greater understanding of the history and cultural heritage of Aboriginal and Torres Strait Islander peoples. We subsidised registration for Core for a total of 161 staff and students across the Faculty, who will have access to the training until December 2022. Staff and students who are interested in undertaking the training but who have not yet signed up should contact [science.EDI@unsw.edu.au](mailto:science.EDI@unsw.edu.au).



# Guidelines and Resources

## UNSW Science Inclusive Online Learning Guidelines

We launched the UNSW Science Inclusive Online Learning Guidelines in 2021. These new guidelines complement the [UNSW Science Classroom Inclusivity Guidelines](#), which were released in 2019 and are oriented to face-to-face instruction.

The Inclusive Online Learning Guidelines focus on inclusion in online and blended learning environments, organised around three core principles: (1) Communicate for Inclusion, (2) Increase Digital Accessibility, and (3) Create Inclusive Digital Spaces. The guidelines provide a range of resources, tips, and strategies based on the principle of Universal Design to support staff in developing more inclusive online learning environments. These guidelines are available [here](#) and our Leganto page can be found [here](#).

The EDI Team also presented these guidelines at the Hybrid Learning for the Future symposium as part of the 2021 UNSW Education Festival. The recording of this event can be viewed [here](#).



## Student Offerings

The Student Offerings resource was created in 2021 to outline student support resources available both in the Faculty and across UNSW broadly, with a focus on equity, diversity, and inclusion. The document serves as a central and easily accessible source of information on resources that will enable students to make the most out of their university experience. Aspects of the Student Offerings resource are currently being incorporated into the new UNSW Science course outlines being developed by the Faculty Educational Designer. The Student Offerings resource can be found [here](#).



# Staff Programs and Initiatives

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## Level Up

Level Up is a promotion support program run by Science EDI that utilises a cohort model, where staff planning to apply for promotion can network with one another, receive formal guidance on promotion procedures and best practices, and gain access to mentorship about building a strong case for promotion. A key feature of the program is to instigate the planning and preparation process early and to provide program participants with content that is catered to the Faculty of Science. Level Up was initiated in 2019 and has run annually since, with varying target cohorts.

For 2020-2021, Level Up was open to academic women at Level B on continuing or convertible fixed-term contracts in the Faculty of Science. The focus on women participants for the 2020-2021 cohort is in line with broad goals to promote gender equity among academic staff, and specific goals for women in senior academic roles detailed in the UNSW 2025 Strategy.

All 11 academic women eligible to participate in Level Up elected to take part in the program, which ran from February-May 2021. The program comprised five main workshops: Program Launch with a welcome from the Dean, Promotion Process and Library Metrics, Application Evaluation, Interview Skills, and Mock Interviews. Alongside these main events, participants attended small cohort meet-ups to complete program-relevant tasks (e.g., review sample promotion applications). We are happy to note that all applicants for promotion from Level B to Level C, including those who participated in Level Up, were successful in 2021.

## Momentum Award Scheme

The Momentum Award is designed to provide staff who are on or who are returning from sustained carer leave with support to help maintain career momentum. This scheme has run in various iterations in the Faculty of Science for many years.

In 2021, we rescoped the scheme to be open to all staff (academic, professional, and technical; men and women) who are employed full-time or part-time within the Faculty of Science, with the exception of Level E academic staff.

In the 2021 round, which was open to staff who returned from leave since January 2020 to account for the prior budget freeze, we awarded \$54,000 to 12 staff members.

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## Equity, Diversity, and Inclusion Excellence Science Staff Award

The Equity, Diversity, and Inclusion Excellence Award recognises staff who promote and bring to life our values and principals of equity, diversity, and inclusion at UNSW and in the wider community.

In 2021 this award went to the SciX Team including Dr Laura McKemmish, Dr Shannan Maisey and Associate Professor Elizabeth Angstmann.



SciX @UNSW



## UNSW Women in Maths and Science Champions Program

The UNSW Women in Maths and Science Champions Program is a unique career development program supporting research students (PhD Champions) and early career scientists (ECS Champions) who identify as women. It is designed to equip them with the skills, confidence, and networks to build a thriving career, and become highly visible advocates for the participation of girls and women in science and maths.

Running its fifth and sixth cohorts, and comprising 24 PhD Champions and 12 ECS Champions, the 2021 program included a combined total of four inperson development workshops and seven online development workshops. These development workshops focused on presentation skills, social media and communication skills, leadership, and career development. The Champions from Cohorts 5 and 6 also completed a Strengths Profile Assessment and participated in three one-on-one sessions, including a dedicated Strengths Profile Debrief and career coaching. The PhD Champions participated in the Postgraduate Research Showcase and 3 Champions were prize winners, including one top prize winner. Overall, the PhD and ECS Champions completed over 450 hours of outreach activity and engaged with an estimated 1400 school-aged students.

Other notable outcomes include:

- 100% of PhD Champion respondents agreed or strongly agreed that they have the necessary skills to positively contribute to the changing culture of women in maths and science, up from 56% of respondents at the beginning of the program.
- 100% of PhD Champion respondents agreed or strongly agreed that they are confident to adapt the content and style of their presentations to audience and context, up from 38% of respondents at the beginning of the program.
- 100% of PhD Champion respondents agreed or strongly agreed that they can adapt their communication style to affect positive outcomes in difference situations, up from 38% of respondents at the beginning of the program.
- 100% of ECS Champion respondents agreed or strongly agreed that they actively engage in self-development activities on a regular basis, up from 56% of respondents at the beginning of the program.

# Student Programs and Initiatives



## First Year Belonging and Transition Program (BAT)

The First Year Belonging and Transition (BAT) Program is a peer support program designed to welcome, connect, and support first-year students from low socioeconomic backgrounds as they transition into their first term of university study. The program includes an O-Week welcome activity, fortnightly peer mentoring sessions, specialised advising, and a virtual community of peers.

BAT was first run centrally in 2020. However, with the development of the Gateway Scholars Program, BAT was slated to discontinue. However, the Faculty decided to adopt BAT in 2021 for students who were not eligible for the Gateway Scholars Program. In 2021, of the 128 students invited to participate in the program, only six students elected to participate in the program. Reasons for low uptake may include saturation of support offerings to this cohort of students and high demand on students' time.

With the creation of Start@UNSW, a central peer mentoring program for Gateway students, students from low-SES backgrounds, and regional and remote areas, the Faculty has elected to retire BAT from 2022 onwards. Through Start@UNSW, eligible students will have access to academic, social, and wellbeing support provided by the central Access and Equity, Peer Connections, Academic Skills, and Student Success teams.

## Science History Trail

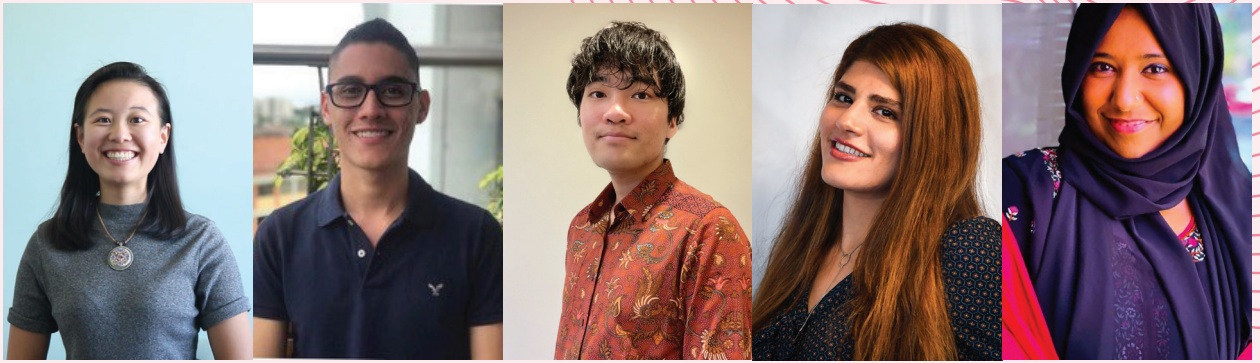
In 2021, we launched a student-led initiative called the [Science History Trail](#). This initiative was designed to increase the visibility of diverse scientists and redefine the traditional representation of a scientist by displaying the images and stories of diverse science role models throughout history. Together with the EDI team, and representatives of the Library and Academic Skills office, undergraduate and postgraduate Science students researched and developed biographies of their chosen scientists, reflected on their stories and why they were chosen to be highlighted. Illustrations were developed by the ARC Creative team based on information and input from the students.

Feedback from student participants was very positive.

- 100% of respondents agreed, at least, that the project helped develop their science communication and writing skills.
- 100% of respondents agreed, at least, that the project enabled them to see themselves represented in science and provided them with a Science role model
- 100% of respondents agreed that the project enhanced their understanding of EDI and how EDI relates to science
- 89% of respondents agreed at least that the project provided them a sense of connection to the Faculty of Science
- 77% of respondents felt that the project upskilled them in desktop research

As noted above, this initiative was featured in an Inclusive Science Series event held during UNSW's *Diversity Fest* in October. A recording of the event can be accessed [here](#).

These illustrations are also used throughout the UNSW Science EDI Annual Report. You can view the whole suite of images and biographies [here](#).



## Student EDI Awards

The UNSW Science Student Equity, Diversity, and Inclusion Awards recognise and celebrate the contributions of our students to Equity, Diversity, and Inclusion in our community. Nominations were sought to acknowledge students who demonstrated excellent leadership, innovation, and contribution to the field of EDI.

In 2021, we awarded five awards valued at \$500.00 each to:

- **Alice Hu** – Music (Honours)/ Science
- **Juan Camilo Zapata Trujillo** – Chemistry
- **Kevin Limanta** – Mathematics
- **Parisa Moazzam** – Chemistry
- **Tasmia Zaman** – Materials Science and Engineering

## Gateway Access Pathway Program

The Science EDI and Education teams worked together to assess applications for the Gateway Access Pathway Program (GAPP), which aims to make university entry more equitable. GAPP offers under-represented students (LSES, Regional & Remote, & Indigenous) an alternative pathway into university.

The Faculty extended early conditional offers to 483 applicants.

## Science and Engineering Indigenous Preparatory Program

The Science and Engineering Indigenous Pre-Program is a free online program designed to support Indigenous students to transition into university and apply for alternative entry into an undergraduate degree. Over two weeks, participants engage in tutoring, mentoring and social activities to develop the skills, networks and confidence to make the most out of university. Participants who successfully complete the program have a high chance of being offered entry into a UNSW Science or UNSW Engineering undergraduate degree program.

The Science and Engineering Indigenous Pre-Program was first run in 2019 and has been run annually since. In 2021, five students applied to the program, all of whom received an offer to participate. Of these, two received early offers from other Universities and one elected not to participate. Both students who participated in the program were offered entry into UNSW Engineering undergraduate degree programs.

We would like to thank the UNSW Science Schools who contributed to teaching into the program.

# School Projects

## BABS/BEES EDI Consultation

In 2021, the EDI Committee in the Schools of Biotechnology and Biomolecular Sciences and Biological, Earth, and Environmental Sciences provided regular and anonymous opportunities for Schools to raise any EDI related issues. This resulted in raising an issue of gendered signage in the multifaith space which led to positive discussions with the Science EDI Team, Central EDI and the Interfaith Committee. Ultimately, the signage on the Multifaith rooms was updated to be more inclusive.

## Chemistry EDI Lockdown Events

The Chemistry EDI Committee hosted three events throughout lockdown to prompt staff and student wellbeing. These events included **1 love + 1 hate** on 31 August: Hosted by Dr Anna Wang, the 1 love + 1 hate event offered participants the chance to catch up with peers through virtual afternoon tea and informal chats; **Memes for Minds** on 15 September: Hosted by Dr Laura McKemmish, the Memes for Minds event was held virtually on R U OK? Day and focused on creating memes to promote actionable mental health messages and providing information on supporting ourselves and those around us; and **Paint/Draw and Sip** virtual event on 21 September: Hosted by PhD candidate Lorrie Jacob, the Paint/Draw and Sip event was designed to allow participants to paint and draw with one another to promote staff and student wellbeing and connection during the lockdown.

## The First Scientists, Reconciliation, & Truth-Telling

The School of Materials Science and Engineering and the Faculty of Science hosted a lunchtime panel chaired by Bec Harcourt to listen to Biripi woman Leanne Howard and Kamilaroi man Matt Taylor share their journeys, challenges, and successes, as well as tips on how we can actively engage in reconciliation which honours and centres the voices of Aboriginal & Torres Strait Islander people.



## Indigenous Astronomy

The School of Physics supported a student-led project in which PhD candidate Giulia Santucci made Indigenous astronomy posters in collaboration with community Elders. The team worked with Indigenous developers to design and print the posters which will be sent to regional schools in Australia and highlighted in the School of Physics in 2022.

## Bachelor of Data Science and Decisions Ambassadors

The annual Data Science and Decisions Ambassador program recruits women studying Data Science and Decisions, who assist the School of Mathematics and Statistics with publicity initiatives. In 2021 Eliza Chew and Kathryn Dalton were Ambassadors in the program and worked on the Girls Do the Maths events, assisting with workshops, panel discussions, and hosting online sessions.

## Psychology 'Quarantine's Got Talent' Event

The School of Psychology EDI committee held an online "Quarantine's (still) Got Talent" quest, with 27 excellent entries in various categories (lockdown fails, new skills, survival tips). The event helped to promote wellbeing and facilitate social connection for staff during the lockdown.

## Girls Do the Maths

The School of Mathematics and Statistics hosted a record 530 high school students from 27 schools in their 2021 Girls Do the Maths workshop. A COVID-safe event was held at the UNSW Roundhouse, as well as a tailored online event for female high school students from Years 10-12, featuring maths activities, presentations, and careers talks.

## Marine Field Ecology for Management and Research

In December 2021, the School of Biological, Earth, and Environmental Sciences partnered with the Gamay Rangers from the La Perouse Local Aboriginal Land Council to run a hands-on two-week course entitled "Marine Field Ecology for Management and Research". This course distilled the collective knowledge sharing of UNSW experts across marine ecosystems and the Gamay Rangers into a tailored 10-day rapid course covering fundamentals of marine botany, zoology and ecology as well as experimental design. The course included a mixture of interactive lectures, field practicals and laboratory sessions.





### **BABS Honours Indigenous Scholarship**

The School of Schools of Biotechnology and Biomolecular Sciences Honours Indigenous Scholarship was established in 2020 with the aim of increasing opportunities for Indigenous students who want to undertake research degrees in BABS. In 2021, the first BABS Honours Indigenous Scholarship was awarded.

### **Indigenous Research Collaboration**

The School of Chemistry undertook an initiative to incorporate Indigenous knowledge into the undergraduate curriculum. Throughout the year, they initiated conversations within the School and received expressions of interest from several research groups about incorporating Indigenous knowledge into their courses.

### **Physics Annual Student Survey**

The technical officer in the School of Physics, Tom Dixon, has launched an annual student survey that aims to understand the key factors that drive retention and attrition among first-year students in Physics degrees and identify barriers that the School can address to make Physics a more diverse and attractive field for under-represented students.

### **Psychology Peer Mentoring**

In 2021, the Psychology Peer Mentoring programme was instrumental in supporting Psychology students during the lockdown. They created a variety of online initiatives such as writing sessions and social forums. 88% of first year and 92% of honours students found the programme helpful in coping with the challenges associated with the COVID-19 pandemic.

### **BEES Ask Me Anything**

In 2021, the School of Biological, Earth and Environmental Sciences hosted three Ask Me Anything events for Higher Degree Research (HDR) students. In these sessions all HDR students were invited to meet with the Head of School, HDR Co-Ordinator, and Postgraduate Coordinator and discuss their concerns, wishes, and ideas in an open and confidential forum. These events included Return to Campus Advice on 26 November; Vaccination Q&A with Professor Mary Louise-McLaws on 18 August; and 2022 Student Priorities and Feedback on 9 December.



# UNSW Science EDI Contacts

## Science EDI Team

- Associate Professor Lisa A. Williams, Co-Associate Dean EDI
- Associate Professor Carlo Caponecchia, Co-Associate Dean EDI
- Mikaela Viray, EDI Project Officer

## Athena Swan Self-Assessment Team – Faculty of Science Representatives

- Dr Damia Mawad
- Elizabeth Haris
- Dr Jessica Alves
- Professor Martina Stenzel
- Dr Natasha Ginnivan
- Associate Professor Neeraj Sharma
- Dr Ruth Thomas

## Women in Research Network – Faculty of Science Representatives

- Dr Frances Byrne
- Dr Marthe-Susanna Wegner

## Diversity Champions from the Faculty of Science

- Dr Rohitash Chandra – Cultural Diversity Champion
- Sophia German – LGBTQIA+ Champion

## Science EDI Working Group

The Faculty of Science would like to thank Professor Adriana Verges, Associate Professor Brendan Burns, Dr Clara Grazian, Dr Damia Mawad, Elizabeth Harris, Dr Fatemeh Vafaei, Dr Frances Byrne, Jean Hsieh, Dr Jessica Lee, Lehan Zhang, Dr Ruth Thomas, Dr Shane Ingrey, and Associate Professor Vy Tran for their contributions to the Science EDI Working Group in 2021.

The Faculty is also excited to welcome our 2022 SEDIWG members, including:

- Dr Damia Mawad, SAGE Athena Swan Self-Assessment Team Representative
- Elizabeth Haris, Postgraduate Student Representative
- Dr Frances Byrne, School of Biotechnology and Biomolecular Sciences
- Jean Hsieh, Postgraduate Student Representative
- Dr Jessica Lee, School of Psychology
- Professor John Roberts, School of Mathematics and Statistics
- Kira West, Science Sustainability Working Group Representative
- Dr Marthe-Susanna Wegner, Women in Research Network Representative
- Dr Samane Maroufi, School of Materials Science and Engineering
- Associate Professor Sarah Martell, School of Physics
- Dr Shane Ingrey, School of Biological, Earth, and Environmental Sciences
- Professor Shinichi Nakagawa, School of Biological, Earth, and Environmental Sciences

