Women in Engineering at Monash


Women in Engineering at Monash

# 2023 Industry Guide

# Introduction

Raksha Ramprasad
Venkata Suvarna

Industry Director

WEM (Women in Engineering at Monash) aims to motivate the upcoming generation of women and gender-diverse engineers by providing an inclusive network that nurtures both social and professional ties. Our industry guide serves as a resource in offering guidance and inspiration to WEM members as they navigate through the complex world of engineering.

This publication is designed to provide industry insights, from essential topics such as company values and current career opportunities to fostering inclusivity and support for women in engineering. Within these pages, you will find illuminating interviews with accomplished women-identifying engineers, showcasing the diverse paths one can take within this wide field. There are three compelling sections: "*Pioneering Pathways: Celebrating Women in Engineering,*" "*Conversations with Catalysts: Interviews with Women in Engineering,*" and "*Breaking the Mould: Women's Journey in the Engineering World,*" each offering unique perspectives and insights into the world of women in engineering.

A special thanks to the Industry Team and WEM committee for all their efforts of putting the guide together. Additionally, I would like to extend my gratitude to Frances Eddy, the creative force behind the design of this beautiful guide. Thank you also to all our industry sponsors whose support has made this guide possible. Your commitment to empowering women and gender-diverse individuals in engineering is commendable, and we look forward to continuing our collaboration in the years ahead.



Introduction

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# President's Address

Gretel Gibson-Bourke

Marie Curie once said, *"I was taught that the way of progress was neither swift nor easy."* As a club, we have made some major progress this year, but it was not without its challenges!

Those who have followed our story would know that for the better part of this year, we have been making the transition from our old brand, "*Female Engineers at Monash*", to who we are now – "*Women in Engineering at Monash*".

This change, though only a few words different, has put us in a better position to truly represent the diversity of our membership and foster the inclusivity that we strive for in the everyday workings of the club.

It has been a mammoth journey, with contributions from all aspects of our committee. From Treasury organising our new merchandise, to Marketing designing our new brand, to Industry and Outreach communicating the change to our sponsors and schools we are connected with, and to Events showcasing our new name at our events throughout the year. I am so proud of the combined effort that was put in to ensure this transition was as smooth as possible And I am equally glad that this change has been met with appreciation by our members and sponsors alike.

The other very exciting thing that has happened for WEM this year is the emergence of the outreach portfolio directed by our Vice President. The team has done an outstanding job connecting WEM with a variety of schools and programs, allowing us to ensure that younger girls know that engineering is so much more than just building bridges. It is so inspiring to see the enthusiasm of the next generation of engineers.

With regards to the 2023 Industry Guide, I would like to offer a sincere word of thanks to our industry team for their unwavering efforts in coordinating the production and showcasing of the Guide. I would also like to thank our sponsors for their part in the support of WEM, to our members for their commitment to our club's mission and to our committee for their contributions not only to the Industry Guide, but to the workings of the club throughout the entire year.

I feel so blessed to have been able to direct the 2023 WEM committee; this team is made up of the most passionate, intelligent, and hard-working women I know. The future of engineering is in good hands.

President's Address

# 2022–2023 WEM Industry Overview

## Networking Trivia Night

In Week 2, we held our first event, where students and industry representatives were invited to compete in a heated trivia competition, with questions relating to ‘STEM throughout the decades.’ We tested the competitors on their knowledge of 19th century discoveries, prominent women inventors, famous STEM achievements and renowned STEM women of Australia. Winners went home with exclusive WEM merch, but everyone felt like a winner as they shared delicious donuts and pizza and made some industry connections during the networking portion of the night.


## Aurecon X WEM

In Week 5, we had our first sponsor event with Aurecon! Monica, Jamali and Mani, all with different engineering backgrounds, gave an amazing introduction to their experience at Aurecon. They guided us through an engaging SWOT analysis to help us identify our strengths, weaknesses, opportunities and threats, sharing with us their own experiences and learnings that inspired us to look within ourselves and the world around us to better understand what makes us unique. It’s these unique traits that Aurecon seeks in employees to help create innovative solutions for their clients. To conclude the night, we had the opportunity to network with the 3 representatives over a meal from Roll’d.

## Worley X WEM

To energise and excite everyone after the mid-semester break, in Week 7, Worley came to Clayton to showcase their awesome assisted reality (AR) headset! The representatives even gave students the chance to try it on themselves, which was not only super cool but also revealed how technology can enhance design, visualisation and maintenance of industrial engineering projects. This was further highlighted by the team Lego building exercise conducted by students while using the headset’s built-in camera and microphone functions. The representatives were very friendly and also gave us valuable industry insights during networking.

## High Tea Networking Night

In Week 9, our Bridgerton-themed High Tea event was as classy as the hit TV series, as students and sponsor representatives were treated to elegant and delicious high tea delicacies while sipping a wide selection of teas in the royalty-like venue. This provided a warm and comfortable atmosphere for everyone to meet and mingle, leading to new connections. Presentations by platinum sponsors enabled students to get to know the companies and their cultures.

Semester 1

Semester One



# 2022–2023 WEM Industry Overview

At WEM, there’s always an exciting and useful industry event to look forward to. This year has been no exception; there’s been plenty of networking, insightful presentations, and fun to bring students and industry together in a casual and comfortable environment. Here is an overview of the year:

Semester 2

## WEM Industry Guide Launch

The annual WEM Industry Guide launch signifies the release of our industry guide. This year, we're excited to announce that the event will take place at the Huntingdale Golf Course, and in honour of the committee's name change from FEM to WEM, the dress code is set to shades of purple. The evening will kick off with presentations from our sponsors and select interviewees, followed by dinner and a lively networking session set in a semi-casual atmosphere, creating a relaxed and welcoming environment for networking.

## WEM x ANSTO

Building on the success of last year's site visit, WEM will be hosting an onsite Synchrotron tour in collaboration with ANSTO. The event will commence with a presentation about ANSTO and an interactive Q&A session with their engineers. This will transition into a site tour, providing students with an opportunity to explore the Australian synchrotron, gain insights into their cutting-edge beamline technology, and learn about their ongoing projects and career opportunities.

Semester Two

# Sponsors

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Relevant areas of study

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Department of Materials Science and Engineering

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# Sponsors

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# Relevant areas of study

| | aurecon | GHD | LOCKHEED MARTIN AUSTRALIA | MONASH MATERIALS SCIENCE AND ENGINEERING | ANSTO | beon / CITIPOWER / Ausgrid / united energy | Invetech | lendlease | NDY A TETRA TECH COMPANY | pwc |
|---|---|---|---|---|---|---|---|---|---|---|
| Aerospace Engineering | ✓ | | ✓ | | | | | | ✓ | ✓ |
| Biomedical Engineering | | | | | | | ✓ | | | ✓ |
| Chemical Engineering | ✓ | ✓ | | | ✓ | | | | | ✓ |
| Civil Engineering | ✓ | ✓ | | | | | | | ✓ | ✓ |
| Consulting | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |
| Electrical & Computer Systems Engineering | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ |
| Environmental Engineering | ✓ | ✓ | | | | | | | ✓ | ✓ |
| Materials Engineering | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ |
| Mechanical Engineering | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Robotics & Mechatronics Engineering | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Research | | | ✓ | ✓ | | | | | | |
| Resources Engineering | ✓ | ✓ | | | | | | | | ✓ |
| Software Engineering | | ✓ | ✓ | | | | ✓ | ✓ | | ✓ |
| Hiring of international students | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Interstate opportunities | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ |
| International opportunities | | | | | | | ✓ | | ✓ | ✓ |



# Relevant areas of study

| | VICTORIA'S BIG BUILD | vēsparum. | wood. | ARCADIS | ATLASSIAN | BCG | Honeywell | LEK | McKinsey&Company | S&C |
|---|---|---|---|---|---|---|---|---|---|---|
| Aerospace Engineering | ✓ | | ✓ | | | | | ✓ | ✓ | |
| Biomedical Engineering | | | | | | | | ✓ | ✓ | |
| Chemical Engineering | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Civil Engineering | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ |
| Consulting | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| Electrical & Computer Systems Engineering | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Environmental Engineering | | | | ✓ | | | | ✓ | ✓ | |
| Materials Engineering | | | ✓ | ✓ | | | | ✓ | ✓ | |
| Mechanical Engineering | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | |
| Robotics & Mechatronics Engineering | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | |
| Research | | | | | ✓ | | | ✓ | ✓ | |
| Resources Engineering | | | | | | | | ✓ | ✓ | |
| Software Engineering | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Hiring of international students | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | |
| Interstate opportunities | | | ✓ | ✓ | | | | ✓ | ✓ | |
| International opportunities | | | ✓ | ✓ | | | | | ✓ | |

aurecon


## Aurecon is a design, engineering and advisory company. Our purpose is bringing ideas to life, to imagine and co-create with our clients a better future for people and the planet.

We are an owner managed company with a strong presence across Australia, New Zealand, and Asia.
Our strength lies in how we bring together our design, engineering and advisory capabilities to provide our clients with integrated solutions across the entire asset lifecycle. From shape and plan – operate and optimise – to close and preserve.

If you want your career to be a rewarding and fulfilling adventure, Aurecon may just be what you're looking for!

### Aurecon is a place where you can belong

People are at the heart of everything we do – the people we work with and the people we design for – and we love our differences.

Each person should be able to develop and have equal and equitable access to opportunities and celebrate what makes them unique. This is what helps them bring their most innovative ideas and become the best at what they do.

To build a diverse and inclusive workplace, we've developed initiatives and policies that support our culture through:

- The principles of equal opportunity employment
- Fair and equal treatment for all employees
- Providing a fair and safe workspace

We strive to cultivate a culture of diversity breadth throughout our organisation and actively pursue a wide range of perspectives and attributes to complement our teams. This is our ongoing commitment, and we are currently channelling our efforts across the following areas.

- **Gender equality & equality** - At Aurecon, we aim to improve the gender balance and equality of our leaders and workforce, seeking opportunity for all employees. While this is a journey, we continue to make progress on our goal to disrupt gender expectations and norms and seek genuine choice and opportunity for all employees. Some of our gender equity and equality initiatives include pay parity audits, closing the gender pay gap, increasing female representation across all levels of staff and ensuring diverse participation in leadership development.
- **LGBTQIA+ inclusion** - We are proud advocates of LGBTQIA+ inclusion and are committed to creating an inclusive workplace where we value, respect and support all employees. We are building a culture that rejects harassment, bullying, discrimination, and stereotypes and actively supports difference, builds connections, and provides psychological and cultural safety. Aurecon has co-founded different networks such as Aurecon Pride for our employees, InterEngineer for professionals in Australia, and LGBTI+ in STEM in New Zealand.
- **Indigenous inclusion** - Aurecon deeply respects and acknowledges the First Peoples of Australia and New Zealand. Our commitment is to create sustainable and meaningful relationships with Aboriginal and Torres Strait Islander peoples in Australia, and Māori and Pasifika in New Zealand.

### Work on real-life projects alongside industry leaders

**Allianz Stadium**

Aurecon provided the structural and civil engineering design for the award-winning and world-class Allianz stadium in Sydney, a sporting and entertainment precinct of an international standard for decades to come. The 42,500-seat stadium features one of Australia's most complex stadium roofs that uses 40 per cent less steel in construction compared to traditional stadia.

**Monash University Woodside Building**

Aurecon's integrated design approach helped Melbourne's Monash University bring to life the innovative Woodside Building for Technology and Design, the largest educational building in the world to achieve Passive House certification.

### Start your career adventure as an Aurecon graduate or intern

We're looking for unconventional thinkers and dedicated doers who feel deeply passionate about co-creating solutions for a sustainable, liveable future.

**Graduate Programme**

Our 2-year programme helps you develop a strong foundation of relevant skills and experience through formal, interactive, and on-the-job learning experiences. You'll work in different teams throughout your graduate rotations, experience our inclusive culture, discover hybrid ways of working, make an impact on community-shaping projects, and build connections to set you up for the future.

As part of a diverse and inclusive team, you'll collaborate with others across geographies and markets, applying your skills to re-imagine engineering and design a better future.

**Perks of being an Aurecon graduate**

- Work in different teams through our graduate rotations
- Experience our diversity, equity, and inclusion culture
- Flexibility to help boost your productivity, effectiveness, and wellbeing
- Ability to join Limelight, our supportive early career professionals network
- Create your legacy working on community-shaping projects across Australia and New Zealand
- Be part of an award-winning graduate programme

**Intern Programme**

Over your university summer break, you'll get a taste of what it's like working at Aurecon with an opportunity to collaborate and work in our diverse and inclusive teams, be immersed in real-life projects, and explore the career that's right for you. Student tailored experiences include:

- Onboarding and training sessions to develop your skills as a consultant
- Networking events with fellow interns and seniors in the business
- Limelight events for professional and personal development
- Learning courses and training in Aurecon U and LinkedIn Learning

### For more Information:

visit our website at **aurecongroup.com/graduates**

aurecon

*Bringing ideas to life*


At GHD, we're committed to making water, energy, and communities sustainable for generations to come. Our commitments anchor us to what is truly important. They give us insights into the best ways to partner with our clients to solve the world's biggest challenges.

Commitment is how we grew from a small engineering practice in Melbourne, Australia, in 1928 into a global professional services company today with over 11,000 employees in 200 offices on five continents: Australia, Asia, New Zealand, the Americas, Europe, and the Middle East.

No matter where our work takes us around the planet, whether we're partnering on a local initiative or a global infrastructure project, we're helping create lasting community benefit. And that's why our work is more than just a job — it is an unshakable belief in the future we're building. Renowned for our core values of Safety, Teamwork, Respect and Integrity, we have grown into one of the world's top employee-owned professional services companies. Our employee-owned status is a powerful point of differentiation and helps drive our passion and accountability in how we serve our clients, deliver projects, and pursue new opportunities.

GHD is the place for aspiring people to thrive, achieve their career goals, and make a lasting impact.



**To discover where a career at GHD could take you, visit** ghd.com/careers

## A culture where people can thrive

As a people-powered business, GHD strives to be an inclusive community where everyone feels they belong. Embracing diversity helps us develop imaginative and responsive solutions that create lasting community benefit.

Our pursuit of gender equity in a traditionally male majority industry has continued since 2014 when female employee targets were first set. To drive a more equitable workplace, we developed a flexible parental leave and return to work policy. In 2007, we established the Women in GHD (WinG) network to empower our women. Today WinG operates across all our offices globally, providing a space for women to connect, inspire and grow.

In 2016, we established a National LGBTQIA+ Employee Resource Group, which is now supported by a growing network of more than 270 official GHD LGBTQIA+ allies across Australia. Since the publication of our LGBTQIA+ Action Plan in 2021, we have developed an e-learning module, partnered with Out for Australia, improved the induction process for new allies, and normalised the use of pronouns through email signatures, business cards and introductions during events. Our long-term membership with Pride in Diversity has helped guide and steer our LGBTQIA+ inclusion awareness training, enablement, policy change and initiative roll-out.

In 2022, we increased our strategic hiring efforts and have grown our Indigenous workforce to ensure we have Aboriginal and Torres Strait Islander peoples engaging with our people, communities, businesses and clients. As a result, we are closer to achieving our 1.8 percent Indigenous employment target as outlined in our Reconciliation Action Plan.

As well as developing a Hybrid/Remote Work Policy to foster wellbeing, flexibility and productivity, our Young Professionals Network continues to provide a platform to help early career professionals build strong working relationships. And through our partnership with Neurodiversity Hub, we're supporting and providing employment opportunities for neurodiverse people. As a next step in our I&D journey, a global accessibility working group has been formed to help create a more accessible environment within GHD.

## What we're working on

At GHD, our driving force is our vision: to make water, energy and communities sustainable for generations to come. Here's how we're making it happen.

### > Kidston Pumped Storage Hydro Project

This world-first project will repurpose an abandoned gold mine into a pumped storage facility to deliver clean energy to Queenslanders.

Read more

### > Designing Perth's new Airport Line

This rail line is a game-changer for Perth, connecting the airport and the city's eastern suburbs with the rest of the urban rail network.

Read more

### > Hornsdale Wind Farm and Battery Storage

Consisting of 99 wind turbines and the world's largest battery connection, this renewable energy project in South Australia is making energy sustainable for future generations.

Read more

### > Wurun Senior Campus

Repurposing the historic Fitzroy Gasworks site in Melbourne, this vertical campus cleverly connects indoor learning spaces with the outdoors.

Read more

## Our graduate and internship programs

Commitment defines how we do business, how we serve our communities and how we care for one another. When you join GHD, we commit to encouraging your curiosity, fostering new ideas, and creating meaningful change.

All new-to-workforce grads are enrolled in our 2-year Graduate Development Program, which helps you become familiar with life in a consultancy. You'll be part of a global class that transcends disciplines and regions, helping you form your network within the business. You'll also meet and interact with senior leadership, learn how to access internal resources like employee groups and other training, and understand what the opportunities are for you to shape your career.

> *"I've been out in the field mentoring our young professionals to visually inspect airport pavements for defects that have the potential to deteriorate an airfield's service life. This practical approach has taught me more as a young professional than I would have learned by just being in the office environment."*

**Christina Hayes, Brisbane, Australia**


Whether it's through our Corporate Social Responsibility program, GHD in the Community, or our design-led innovation program, Smart Seeds, we give our people the opportunity to help make a positive social and environmental impact on the communities in which we operate.

**To discover where a career at GHD could take you, visit** ghd.com/careers

# LOCKHEED MARTIN AUSTRALIA

## Lockheed Martin Australia is an industry leader in defence and technology.

## Are you looking for a career that puts you at the front line of innovation?

A career with us could take you in directions you never could have imagined. At Lockheed Martin Australia, we are part of a global team that makes an impact everyday – our collective strengths make a difference in the lives of one another, our customers, our community and our planet. We are at the forefront of helping to solve the world's most complex defence and security problems.

We're proud of our inclusive and collaborative culture that embraces and celebrates our people's differences. Most importantly, we live by our values of Do What's Right, Respect Others and Perform With Excellence every day.

Lockheed Martin graduates and interns are driven and ambitious team players, passionate about building a better tomorrow.

### Workplace Diversity

Lockheed Martin has long embraced both equal employment opportunity and affirmative action. The company has a variety of employee networks, employee resource groups and leadership groups.

We do not discriminate based on race, ethnicity, national origin, age, religion, sex, disability or marital status when hiring, promoting and training employees. Our affirmative action programs seek to identify and break down barriers, both visible and invisible, creating an even playing field where everybody has a fair chance to reach their full potential in contributing to our business.

### Current Projects

We deliver exceptional program performance and leading innovation for Australia across a broad range of environments and domains in the aerospace, defence and civil sectors.

Lockheed Martin's diverse programs form a critical backbone of Australia's current and future defence capabilities including Next Generation Pilot Training, Advanced Guided Weapon Systems, Combat Systems Integration, Rotary Wing Systems and Sustainment, 5th Generation Air Combat Capability and surveillance across air, sea, land and space.

We know it takes a diverse, collaborative team to deliver our programs. That's why we need graduates and interns who are driven, ambitious team players who are as passionate as we are about building a better tomorrow - today.

### Graduate Program/Internships

Lockheed Martin Australia has consistently been recognised as one of the top graduate employers in the nation. Our award-winning Graduate Development Program won the Australian Defence Industry's Best Graduate Program in 2020, an award we are very proud to have received.

The Graduate Development Program is designed to expose graduates to unique learning opportunities, whilst contributing to stimulating, ground-breaking projects. We partner with Australia's research and industry communities to support our global supply chains, providing opportunities for technology transfer, innovation, local skilled jobs and business growth. Our graduates have the opportunity to be engaged with all these facets of our business.

All Lockheed Martin Australia graduates participate in the two-year Graduate Development Program, with our cohorts commencing in either February or mid-year.

### All graduates benefit from the Program's many features, including:

- Permanent full-time employment at Lockheed Martin Australia from Day 1
- A team role in a cutting-edge program
- A 'buddy' to help start the journey with Lockheed Martin Australia along with a structured induction program tailored to the graduate cohort
- A designated mentor for ongoing career advice and support
- A supportive environment where all our leaders are provided with development in leading early career starters and creating a learner centred environment
- An individualised on-the-job training program covering job-specific processes and techniques
- A graduate development program involving contemporary training spanning leadership development, communication and technical skill development
- Psychometric profiling using insights that enhances their ability to read people and adapt their communication accordingly
- Access to leading technology and thought leadership both face-to-face and virtually
- A competitive starting salary with regular reviews
- A commitment to work/life balance with a 9-day fortnight with flexible working hours
- New starter interviews three months after joining to check in on how they have settled into the organisation

For those still studying towards a relevant degree at an accredited university, Lockheed Martin Australia also offers its Industry Based Learning Program. This six month full-time program is aimed at providing you with work experience within a program environment.

*"The people I work with are so lovely and welcoming, which has made the transition to the professional world far easier than I ever expected. Lockheed Martin encourages perpetual learning and knowledge sharing. This has been invaluable to my professional development. I've been able to work on many interesting projects that bring me a sense of satisfaction and achievement from my work; it feels like the work I do really matters. I've also deeply enjoyed the opportunities I've been given to inspire the next generation through my involvement in programs such as Science Alive and the WiSTEMS Industry night. I am excited to discover where my career with Lockheed Martin will take me in the future." – Sahara*


### Further Information

To hear about our exciting early career opportunities such as internships, industry based learning placements or the graduate development program visit: www.lockheedmartin.com/en-au/careers/early-careers.html

MONASH University

# MATERIALS SCIENCE AND ENGINEERING

**Monash University's Department of Materials Science and Engineering is an international, research-active department with modern facilities and a broad education offering in materials science and engineering. Although our work spans the entire materials field, we specialise in both the cutting-edge and fundamentals of metals and alloys, biomaterials and tissue engineering, nanomaterials, polymers, composites, corrosion, advanced materials characterisation and materials modelling. Our department is well known for our outstanding facilities, integration of practical and theoretical learning, student-run teams and our focus on people and the community.**

## HISTORY

The department of Materials Engineering was officially launched in 1971 with 16 students and by 1980 had the largest research group in the Faculty of Engineering. The department has since gone through numerous incarnations before officially becoming the Department of Materials Science and Engineering in 2013. In 2022, according to the Academic Ranking of World Universities, the department was ranked number one in Australia and 35 globally for materials science.

## EMPLOYEES

Our department is made up of 31 academic staff (29% female).
We have 150 Bachelors of Materials Engineering students (40% female) and 100 PhD students (32% female). Students and staff join our department from more than 40 countries around the world.

## COMPANY VISION/FUTURE GOALS

Our department and its researchers are currently looking to find new and innovative ways to engage with the public and industry so that we can better understand their needs and how we might meet them.

## GIVING BACK TO THE COMMUNITY

Our department is committed to producing research outcomes that are in the public good. This includes the research and development of materials which help mitigate the effects of climate change, reduce the impact of environmental pollution and aid in the treatment of diseases.

## WHAT SETS MSE APART?

Our department prides itself on building life-long relationships with students, from enrolment through to alumni. We also actively promote diversity and inclusion at all levels.

## Q&A

**What type of people succeed in Research?**

Successful researchers come in many varieties but often share some common traits. These include being innately curious about the world, creative, able to clearly communicate with experts and non-experts alike, sensitive to the wants and needs of others and excellent at organising their time.

Our department is located within Monash University's Clayton campus. This places it within walking distance of the CSIRO's Clayton Central precinct, the Australian Synchrotron and the Melbourne Centre for Nanofabrication.

Most of our researchers are located within the New Horizons research centre, a collaborative research environment designed to create new multi-disciplinary research opportunities for industry, engineers, scientists, researchers and government.





MONASH University

MONASH ENGINEERING

# PHD & MASTERS SCHOLARSHIPS

**Materials scientists and engineers make a unique contribution – not just by making new materials, but also by improving what we already have. Here at Monash, our graduates and researchers are making things stronger, lighter, more functional, more sustainable and more cost-effective. Their contributions underpin all aspects of engineering, manufacturing and health sciences. Not surprisingly – they're increasingly in demand.**

## THE OPPORTUNITY

Expressions of interest are sought from outstanding candidates interested in undertaking research studies in Materials Science and Engineering at Monash University.

Our PhD and Masters by Research degrees are a great opportunity to work on a significant research project under the direction of world-leading researchers. We have projects in the areas of energy materials, metals and alloys, biomaterials, additive manufacturing and functional materials. Our department is ranked the No.1 Materials Department in Australia, and we have state-of-the-art laboratories for materials research, with centres for electron microscopy and additive manufacturing.

## TOTAL SCHOLARSHIP VALUE

A $33,000 per annum (tax-free) (2023 rate). Tuition scholarships available to international students.

## SCHOLARSHIP REQUIREMENTS

There are separate scholarship rounds for local (domestic) and international students. To be eligible to apply for domestic postgraduate research scholarships an applicant must be an Australian citizen, New Zealand citizen or a Permanent Resident of Australia. International postgraduate research scholarships are available for non-domestic applicants that cover both living allowances (stipend) and tuition (international student fees).

## ELIGIBILITY REQUIREMENTS

Applicants will need to hold a first-class honours degree from an Australian University or equivalent degree from an overseas university in a relevant discipline.

**Full details for the relevant requirements are available at:**
***monash.edu/graduate-research/future-students/apply***

## TO RETAIN THIS SCHOLARSHIP

The recipient of this scholarship must maintain satisfactory academic progress throughout their research degree.

## APPLICATION PROCESS

The first step in the application process is to identify a potential supervisor.

**Research profiles of academics in the department can be found at:**
***monash.edu/engineering/departments/materials/about-us/our-people/academic-staff***

Once you have identified a potential supervisor, email them with your CV to discuss potential projects on offer.

Academics will then issue a formal invitation to apply which you can use to start the online application process.

## APPLICATION DEADLINES

**The yearly scholarship application deadlines are:**

**International:** 31st March & 31st August

**Domestic:** 31st May & 31st October

## ENQUIRIES

Enquiries about the scholarship application processes can be directed to:

**Faculty of Engineering Graduate Research Office**

eng-gradresearch@monash.edu

+61 3 9905 5222

## MORE INFORMATION

Find out more about PhD and Masters by Research degrees and scholarships at:
***monash.edu/engineering/future-students/graduate-research/phd***

**MATERIALS SCIENCE AND ENGINEERING**

MSE.Enquiries@monash.edu

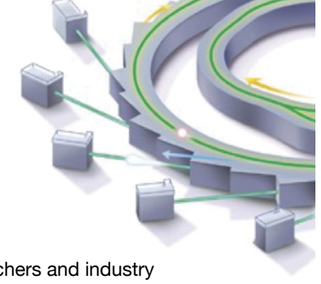
+61 3 9905 4941

MONASH ENGINEERING

GROUP OF EIGHT AUSTRALIA

Australian Government

ANSTO



## Company overview

ANSTO is the home of Australia's most significant landmark and national infrastructure for research. Thousands of scientists from industry and academia benefit from gaining access to state-of-the-art instruments every year.

To find solutions, ANSTO operates much of Australia's landmark infrastructure including one of the world's most modern nuclear research reactors, OPAL; a comprehensive suite of neutron beam instruments; the Australian Synchrotron; the National Imaging Facility Research Cyclotron; and the Centre for Accelerator Science.

The Australian Synchrotron is a major research facility located in Clayton, a technology and innovation hub of southeast Melbourne. The Australian Synchrotron produces synchrotron radiation, a form of electromagnetic radiation that spans a broad range of wavelengths, from infrared to X-rays, which are used in individual experimental facilities to examine the molecular and atomic details of a wide range of materials. The advanced techniques are applied to research in many important areas including health and medical, food, environmental science, biotechnology, nanotechnology, energy, mining, agriculture, advanced materials and cultural heritage.

## Workplace Diversity

ANSTO is very active with diversity and inclusion as it strives to enhance the workplace and its community. One of the initiatives has been the women in engineering internship program that involves networking with universities to connect with women studying engineering. This program has been a massive success with a total of 12 interns over 5 years. Additionally, ANSTO in looking into initiatives that foster cultural and neuro diversity.

## Current Projects

ANSTO's current BRIGHT project aims to facilitate the design and installation of eight additional beamlines, of which four have now been completed, enabling the facility to meet the needs of Australian researchers and industry partners and continue enabling ground-breaking research well into the future. To find more information about the research and case studies the synchrotron is discovering, please visit: https://www.ansto.gov.au/facilities/australian-synchrotron/synchrotron-case-studies

## Graduate/Internship Programs

ANSTO's highly-regarded Graduate Development Program aims to develop and nurture the next generation of Australian business and science leaders. Graduates gain invaluable hands-on experience and professional development opportunities during this 2-year rotation program.

Moreover, most summers the Australian Synchrotron runs a paid women in engineering internship program. This program will allow successful applicants to gain industry experience in a unique and supportive environment. Applications generally open in October.

## We are looking for students with degrees in

- Mechanical engineering
- Mechatronics engineering
- Software engineering
- Computer science
- Electrical engineering

### Further Information

October 2nd 2023, you will have a rare chance to go behind the scenes of the Synchrotron during the WEM-ANSTO tour where you have the chance to:

- Learn how the Synchrotron works and the amazing research it enables
- Talk to our scientists stationed at the beamlines
- Interact with ANSTO scientists, engineers and technicians through a Q&A panel.

For more information please visit: https://www.ansto.gov.au/facilities/australian-synchrotron



beon Energy Solutions

CITIPOWER

Powercor AUSTRALIA

united energy

# CitiPower, Powercor, United Energy & Beon

## Company Overview

As electricity distribution companies we provide safe, reliable and affordable power to 1.9 million Victorian customers every day. We use our network of poles, wires and infrastructure to bring power to homes and businesses across almost 65% of Victoria. We're also the gateway to a clean energy future, dedicated to finding solutions and harnessing new technology to benefit our customers, communities and the environment.

Our head office is based in the CBD of Melbourne and we have 14 depot locations across Victoria.

## Workplace diversity

Work with us, and you'll see that our embedded values underpin a healthy and positive workplace culture where you'll feel you belong right from the start.

We work hard to ensure our organisation is inclusive and diverse, so everyone can feel equally valued and respected at work. That's backed up by our Inclusion and Diversity Strategy, through four key focus areas:

- Inclusion
- Gender diversity
- Aboriginal engagement
- Flexible working conditions

Developing the next generation of female leaders and seeing more women take up leadership positions is vital for gender equality. So we've set gender targets to ensure continuous improvement in representation of both women in leadership and women in each business unit. In addition, we work hard to ensure the process of paying and promotion is both fair and unbiased.

We are proud to be a WORK180 endorsed employer for women and an AAGE Top Graduate Employer in 2023. Our commitment to helping all women thrive in the workplace includes initiatives such as our Women in Power network, Women in Engineering and Electrotechnology scholarships, a generous parental leave policy, and embedded flexible working options.

## Current Projects

Underway are industry leading projects in community batteries, demand management, smart charging for electric vehicles (EVs), microgrids, and developing and trialling a LV DERMS system as part of our response to minimum demand risks.

## Graduate Program

We believe that what makes our graduate programs unique is the way you're acknowledged as a critical part of the team – right from the start. You'll be valued and rewarded for the skills and smarts you bring to the organisation while being given the opportunity to take charge of your own career trajectory.

We recognise that high achievers thrive when they're supported and empowered. So we've created a structured program that quickly immerses you in real-world assignments.

Electrical Engineering graduates will get their career off to a great start with four 6-monthly rotations, followed by a 12-month rotation, mini 1-week rotations, a three-day development event, ongoing coaching and mentoring from senior leaders and a personal mentor, a graduate trip, a buddy in your first year and lots more.

**Applications open March 2024. See our profile on GradConnection to read our Graduates stories.**

## Vacation Program

This program is designed for students who are coming into their last year of undergraduate studies in electrical engineering. Taking part in paid work experience provides genuine insight into our network. Working on live projects, you'll gain practical skills and hands-on experience. Available over a 12-week period from November to February. Applications open end of August.

Curious to find out more?
Visit powercor.com.au/careers/

# Invetech

For more than 30 years, we have worked with health and life science leaders around the world to co-create breakthrough solutions that millions rely on every day.

Through proven technology platforms, expert insights and informed action, we help our clients resolve complexities in design, operations and technology - swiftly transforming ideas into market-ready diagnostic technologies and vital therapies. With headquarters in Melbourne and U.S. offices in San Diego and Boxborough, together, we're accelerating healthcare advancements.

- 30+ years bringing product ideas to life for healthcare and life sciences industries
- 30+ international awards for product design
- 8 months to develop rapid testing capabilities for COVID-19

## Why work at Invetech?

- Get involved in innovative projects and develop instruments that revolutionize healthcare
- Become part of an enthusiastic, inclusive, and driven team
- Advance your career and achieve your professional goals with development opportunities
- Enjoy a competitive salary, flexible work options, incentive plans, and other benefits

## Inclusion & Diversity

At Invetech Inclusion and diversity matters. We all have a role in building a community where everyone belongs. We believe in we are more together. We are working toward creating a more diverse Invetech through hiring, retention and development strategies. We are investing in the development of our leaders, managers, and allies to create an environment where everyone belongs. Our aim is to build a culture of equity for all of us, that enables greater innovation for customers and the world.

> *"I started at Invetech as a graduate engineer in software, and over the 10+ years I've been with the company I have developed a broad range of software, verification, consulting and leadership skills. My work at Invetech has given me a deep and practical understanding of the challenges of product development, manufacturing, regulation, and medical diagnostics - and a passion for working in a field such as healthcare that can make such a difference to peoples' lives."*
>
> **Lauren O 'Connor - Program Manager**

Check out positions via our career page: www.invetechgroup.com/careers




Being bold and innovative characterises our approach and doing what matters defines our intent. We create award-winning urban precincts, new communities for older people and young families just starting out, retail precincts, and workplaces to the highest sustainability standards. We are also privileged to create essential civic and social infrastructure including state-of-the-art hospitals, universities and stadiums around the world. Lendlease has been entrusted with many projects of public, cultural and social significance: constructing the Sydney Opera House, creating the National September 11 Memorial & Museum in New York, and restoring and renovating historic buildings such as London's Tate Britain and National Theatre. As we expand our experience and our footprint, we aspire to continue creating places people want and care about, and keep providing value for securityholders and the broader community. Headquartered in Sydney, our people are located in four operating regions: Australia, Europe, the Americas and Asia.

## Vision and Future Goals

Employ our placemaking expertise and integrated business model in global gateway cities to deliver urbanisation projects and investments that generate social, environmental and economic value.

## Why Lendlease?

Lendlease offers an ecosystem of growth, diversity, and potential, where:

- You can work on a variety of projects, from construction to digital innovation.
- You'll be part of a diverse team, with people from all walks of life.
- There's an opportunity to make a tangible, positive impact on the world.

## Opportunities for Students:

- Engage with Lendlease as an undergraduate.
- Opportunities typically for students who have completed their second year or beyond in their degree.
- Welcoming students from various disciplines, including construction, engineering, and business support services.
- Stay updated with opportunities by registering interest with the Graduate Resourcing team.

## Lendlease Global Graduate Program:

**Your Future Begins Here**

- A platform that respects individuality: Be who you are and make your mark.
- Comprehensive development opportunities in Construction, Digital, Enterprise Support, and Property Development.
- Open to a wide array of degree disciplines.
- Immerse yourself in innovative projects, ranging from creating sustainable places to digital transformation efforts.
- Work with a global perspective: While based in Australia, you'll collaborate on projects worldwide.
- Contribute meaningfully to environmental protection through Lendlease's commitment to sustainability and Mission Zero targets.
- Benefit from a supportive, inclusive environment that prioritises your wellbeing.

## What Makes Our Graduate Program Stand Out?

- **Experience-Driven Learning:** Your journey with Lendlease will be what you make of it. Dive into at least two diverse rotations over the two-year program.
- **Holistic Growth:** Get a comprehensive insight into Lendlease's diverse operations and identify where you can shine the brightest.
- **Mentorship at Every Step:** Engage with managers at all levels and be guided by a dedicated program support team, who will tailor a development path just for you.
- **Continuous Learning:** Enjoy a blend of individualised experiences that evolve as you progress. Your role-specific learning complements the hands-on experience, ensuring a rounded development.
- **Real Work, Real Learning:** At Lendlease, you don't just learn; you learn through doing.

**Minimum 2 rotations** accross projects or roles

**Learning programs** to build upon your professional and technical skills

**Networking opportunities** across business units with graduates and leaders

**Support structure** consisting of Manager, Buddy, Mentor and Graduate Program Team

To learn more about upcoming career opportunities click here: https://www.lendlease.com/au/careers/

# NDY GRADUATE PROGRAM

NDY
A TETRA TECH COMPANY

## NDY IS AN INNOVATIVE AND DIVERSE BUILDING SERVICES AND STRUCTURAL ENGINEERING CONSULTANCY, WITH A COMMITMENT TO BUILDING A BETTER FUTURE THROUGH EXCELLENCE IN SUSTAINABLE DESIGN.

The NDY Graduate Program offers you as a graduate a comprehensive development program with ongoing technical training and continuous professional development. This ensures you will receive all the necessary post-graduate training to optimise your opportunities for career development and growth.

NDY recognises you are unique and your development is essential to your success and future growth. At NDY you will work with a multi-disciplinary team of experts to design landmark developments from project feasibility/inception through design development, construction to project completion.

## OUR SERVICES

- Acoustics
- Audio Visual
- Building Information Modelling (BIM)
- Commissioning Management
- Controls & Integration
- Communications (ICT)
- Electrical
- Fire Engineering
- Fire Protection
- Hydraulics
- NDYLIGHT (lighting design)
- Mechanical (heating, ventilation and air conditioning)
- Security
- Smart Buildings
- Structural & Civil
- Sustainability
- Vertical Transportation

## OUR MARKETS

- Aged Care
- Asset Performance
- Corrections & Justice
- Defence
- Education
- Health & Sciences
- Industrial
- Interiors
- Mission Critical
- Offices
- Residential, Hotels & Mixed-Use
- Retail
- Sports, Entertainment & Public Buildings
- Transport

## OUR PURPOSE IS MAKING SPACES WORK


**INTERNSHIPS FOR SUMMER 2023-2024 ARE AVAILABLE NOW - REGISTER YOUR INTEREST AT NDY.COM/GRADUATES. GRADUATE APPLICATIONS FOR 2024 HAVE CLOSED, APPLICATIONS FOR 2025 WILL OPEN MARCH 2024.**

For further information about NDY go to **www.ndy.com or follow us on social media.**


Today's world isn't simple. The challenges facing business and society are complex. At PwC, we know those challenges need to be looked at from a new angle. With your human ingenuity, passion and experience combined with the latest technology, these problems become easier to tackle.

We focus on your skills and passions, not just your degree and CV. With our diverse range of businesses and variety of work, you'll discover a unique way to help us solve important problems together.

So what type of solver are you?

Take our quiz to find out!

So what type of solver are you? Take our quiz to find out!

pwc

BIG BUILD GRADS

# BUILD BIG WITH US

## Victoria's Big Build

We're building more than 165 projects across the state that will change the way that Victorians work, live and play including:

**Level Crossing Removal Project**
Removing 110 dangerous and congested level crossings.

**Major Road Projects Victoria**
Easing congestion and making travel quicker by building better roads and bridges.

**North East Link**
Building the biggest road project in Victoria.

**Rail Projects Victoria**
Delivering the Metro Tunnel and Regional Rail Revival.

**West Gate Tunnel Project**
Building an alternative to the West Gate Bridge, which will reduce congestion and remove trucks from residential streets.

## Workplace Diversity

We provide opportunities to join various networking and resource groups for gender equality, disability, LGBTIQ+ and Aboriginal and Torres Strait Islanders, that will help you to connect with other community members and allies.

Our gender equality initiatives such as Women in Transport, provide mentoring opportunities to help you grow and learn as well as a scholarship program, that you will be eligible for after your first year.

We are committed to improving the employment outcomes of people living with disability. We do this through practical support, such as reasonable adjustments and ensuring accessibility throughout your whole experience here. We're committed to self-determination and working closely with the Aboriginal community to drive action and improve outcomes.

## Graduate Programs

Our graduate programs will give you the opportunity to develop your technical and professional skills through a tailored learning experience. Over 2 years, you will undertake rotations in a range of business areas and receive career planning support through our structured learning and development program.

By joining one of our teams, you'll not only gain first-hand experience working on real projects, but you'll also be helping to make it easier for Victorians to get where they need to go quickly and safely.

## Who are we looking for?

We offer graduate roles across a wide range of disciplines including civil engineering, electrical engineering, mechanical engineering, mechatronics, communications, human resources, information systems, land planning and urban design, legal, safety and sustainability.

#2 CONSTRUCTION & PROPERTY SERVICES 2023

TOP 10 MOST POPULAR GOVERNMENT EMPLOYER 2023 FINANCIAL REVIEW

**"IT'S SO VARIED... ONE DAY I'M IN THE OFFICE DOING DESIGN, THE NEXT DAY I'M OUT ON-SITE SEEING THINGS BEING BUILT."**

**Betania** – Civil Engineering Graduate, MRPV

Our graduate programs are the perfect opportunity to kick start your career. Find out more at **bigbuild.vic.gov.au/grads**

VICTORIA State Government

*Authorised by the Victorian Government, 1 Treasury Place, Melbourne*



# vēsparum.

## A new kind of AI company.

We are a founder-led, world class partner that brings together a potent force of AI solutions, with deep expertise in capital markets to create transformative value for our clients. It is this combination of technical capability that spans AI, data science, product, and engineering, with capital advisory expertise, that makes us such an innovative partner to clients and investors.

It is our vision to lead the world in applying AI to help good organisations become great ones. This will be achieved by combining world leading tech and data, to not only guide strategy, but transform business models through smart AI solutions that enhance equity value. In this way we do more than advise – **we build, deliver, and invest**.

## APPLICATIONS

We are looking for high-achieving, creative students from all disciplines who have a strong interest in equity capital markets, AI, or consulting and strategy. Our values are **integrity, humility, empathy, and curiosity** and we look for students who embody these values.

Applications for both our winter and summer internship programs will open in mid-April closing in mid-May. They will be followed by two rounds of interviews as well as a written test.

Keep an eye on our **careers page** where you will find all the important information and be able to apply directly.

www.vesparum.com/careers

## INTERNSHIPS

We run a 4 week winter internship and a 10 week summer internship program, offering interns the opportunity to work across client engagements and internal workstreams.

Our internship program looks to **mimic life** as an Analyst at the Vesparum Group.

During the program interns on the Vesparum Capital side will have the opportunity to contribute to key client deliverables including writing announcements, developing financial models, conducting research, and creating presentations.

Interns at Affinda will have the opportunity to develop AI products with our Data Science team, help to train and build our AI models, and work on active client projects to analyse model performance results and develop key deliverables.

## GRADUATE ROLES

Generally we recruit through our internship program. However, if you wish to apply for a graduate role but are unable to complete an internship beforehand, please get in contact via **careers@vesparum.com**.

## Company Overview

Wood is a global leader in consulting and engineering, delivering solutions to critical challenges in energy and materials markets. We provide consulting, projects and operations solutions in 60 countries, employing around 35,000 people. www.woodplc.com

Our headquarters are in Aberdeen Scotland and in Australia we have offices in Brisbane, Melbourne & Perth. Wood was founded by Ian Wood in 1982 when it split away from JW Holdings the largest fishing company in Scotland. We are listed on the London Stock Exchange.

What makes us different is that we have the capability to deliver solutions from concept to construction as also have a sizable blue collar workforce.

## Workplace diversity

We are commitment to creating an inspired culture with diversity and inclusion permeating every corner of our global organisation, where all our people feel they belong, are empowered, and supported to succeed. One of our sustainability targets are to improve gender balance with 40% female representation in senior leadership roles by 2030.

We recently embarked on our Remarkables campaign where we're on a quest to tell stories of our remarkable employees. The stories of the people **designing the future** of our growth markets, of the experts **pushing the envelope** and **influencing industry,** of the graduates and apprentices **carving their own path,** of the passionate people **driving our culture,** of people, **ultimately, transforming our world.**

## Current Projects

> Awarded a contract extension to October 2025 for brownfield engineering, procurement, and construction management by Woodside Energy, to support ongoing operations of the North West Shelf Project in Australia.

> The Life Sciences team in Melbourne, Australia are working with key partners to deliver the Australian Institute for Infectious Disease (AIID).

> Awarded a multi-year enterprise framework agreement to continue to provide services to Shell's global projects.

## Details of Graduate or Internship Programs

We have a global graduate program where we have two intakes each year, one in March and another in October. Each intake is split into eastern & western hemispheres

and then into smaller cohorts for development workshops. We also offer graduates the opportunity to enroll in a certificate 4 in Project Management.

A quote from one our grads in the Perth office:
"*I have a great team to work with who are friendly, and supportive. My managers are approachable and are always there to resolve any and every issue to make work a comfortable place for us all. It makes a huge difference!*"

A quote from one our grads in the Melbourne office:
*"Working with Wood has exposed me to a diverse range of industries, from utilities to oil and gas. Wood supports me to ensure that I am well equipped to tackle them with my fullest potential".*

### Further Information

**2024 graduate recruitment campaign (2025 intake)**
**Key dates:**
Applications open..... 27th February 2024
Applications close ..... 24th March 2024

**2024/2025 Summer vacation program:**
Applications open..... 29th July 2024
Applications close ..... 11th August 2024

To learn more about your company visit:
www.woodplc.com

Our page on GradConnection:
https://au.gradconnection.com/employers/wood



Arcadis is the world's leading company delivering sustainable design, engineering, digital and consultancy solutions for natural and built assets. We are more than 36,000 architects, data analysts, designers, engineers, project planners, water management and sustainability experts globally, all driven by our passion for improving quality of life.

We're reimaging the places where we live and work, developing new ways to move people and goods between our cities and redefining how we use and protect the resources we need. Their work is guided by our company's core values: People First, Integrity, Client Success, Collaboration, and Sustainability.

You will have the opportunity to work on industry-defining projects, finding solutions to real challenges that make a difference to people's lives. You're encouraged to have a growth mindset and are given the space to develop personally and professionally, building a flexible career that works for you. At Arcadis, our people are our greatest asset. That's why equality, diversity, and inclusion are so important for our company. Ways Arcadis supports diversity in our workforce:

> Arcadis Australia has achieved the *WGEA Employer of Choice* for Gender Equality citation for 2021-2023.

> From 2019 to 2022 our permanent female hiring rates have risen to 36% with 50% of our Senior Manager appointments being female.

> 14 weeks paid parental leave for primary carers with no waiting period.

> We are committed to eliminating the pay gap, ensuring there is pay equity among all employees.

> Our flexible workstyle includes work from home and part time options and empowers our people to find a workstyle that works for them and their individual situation.

### Key Dates for 2023 Program to be confirmed. Approximates are below

> Graduate 2024 positions (to start in Feb 2024): Ads live August 2023. Graduate 2025 positions will be advertised around April 2024.

> Summer Internship/Undergrad Positions: Ads will go live in Sept for roles to commence in November.

Armed with a credit card and a dream, university friends Mike Cannon-Brookes and Scott Farquhar set out to create Atlassian in 2002.

We build tools like Jira, Confluence and Trello to help teams become more nimble, creative, and aligned.

Using those tools, our customers and teams have helped put the Mars Curiosity Rover into space, develop the cochlear implant, and built thousands of products launched to millions of customers around the world.

Our mission is to unleash the potential of every team.

atlassian.com/company/careers/students

It's our mission to unleash the potential in every team, and we know that teams perform best when they are diverse and every team member feels that they belong. It's the unique contributions of all Atlassians that drives success, and we're committed to building a culture where everyone does meaningful work and is recognised for their efforts.

Starting your journey with Atlassian means tackling real problems that are critical to the functioning of our business. We want you to do work that matters and is on our roadmaps which will impact other Atlassian teams and our customers.

From Day 1, you will have the support of a dedicated manager, be surrounded by senior team members who are some of the best minds in the industry and dive into specific training built just for you.

We believe that work should also be fun! We provide plenty of opportunities to connect and collaborate with your cohort. We organise social events, learning sessions and fun activities to keep you engaged before you start!


BCG, a pioneering force in business strategy, partners with industry leaders to navigate challenges and seize opportunities. We're dedicated to driving organisational growth, fostering sustainability, and advancing societal change. As part of our global family of 30,000 professionals, you'll be at the forefront of innovative consulting, cutting-edge technology, and transformative corporate and digital initiatives.

At BCG, your career is only limited by your imagination. With each project, you're offered a chance to reshape your role and define your trajectory. We equip you with unparalleled resources and mentorship, empowering you to realise your fullest potential and accelerate your career in unexpected ways.

Our offerings span from traditional consultancy to digital tech, environmental initiatives, and societal betterment. Beyond merely meeting standards, we set new ones.

By joining us, you're not only amplifying our clients' aspirations but expanding your horizons. Rooted in our five core principles, we invite you to experience our ethos and explore the vast opportunities that await within our diverse teams.

## Kickstart Your Journey at BCG

At BCG, our doors are wide open for budding talents—students and fresh graduates keen on channelling their fervour and zeal into each challenge, irrespective of its magnitude. We're not just hunting for achievements; we're on a lookout for inquisitiveness, eclectic experiences, fresh viewpoints, and a zeal to shatter the status quo.

To learn more about career opportunities, visit our website: https://careers.bcg.com/search-results

Early careers page:
https://careers.bcg.com/early-careers

# Honeywell

Honeywell is a Fortune 500 technology company that delivers industry-specific solutions that include aerospace products and services; control technologies for buildings and industry; and performance materials globally. Our technologies help aircraft, buildings, manufacturing plants, supply chains, and workers become more connected to make our world smarter, safer, and more sustainable. Our main corporate office is in North Ryde, Sydney and we have other offices in Brisbane, Perth, and Melbourne.

Connected through our common purpose of innovation and responsibility to ensure a more sustainable future, we are committed to protecting the environment, our people, and our communities where we live and work.

## Workplace diversity

Our mission in Pacific is to foster a performance culture that is built on the foundations of welcoming, including, respecting, understanding, and appreciating the different perspectives, backgrounds and experiences our people bring to the workplace everyday. Our leaders play a critical role and are at the forefront of our workplace culture. At Honeywell, we ensure that gender, race, background, sexual and gender identity or beliefs have no bearing on people's career potential – people are recognised purely for their contributions.

Honeywell is dedicated to nurturing your professional growth through a tailored technical learning framework. This includes face-to-face leadership workshops, leader-led webinars, and mentorship opportunities to enhance your capabilities. Our Buddy system ensures a smooth transition, while structured networking with Senior Leaders cultivates valuable connections. By setting annual goals and joining our global network of 15,000 engineers, you'll expand your impact within Honeywell's dynamic ecosystem.

To learn more about Honeywell Pacific, visit our website at
https://careers.honeywell.com/honeywell-pacific



# LEK

## About L.E.K. Consulting

L.E.K. is a global strategy consulting firm that works with some of the world's most innovative and successful organisations. L.E.K.'s uncompromising approach helps clients consistently make better decisions, deliver improved business performance and create greater shareholder returns. To accomplish this, L.E.K. focus on training, mentoring and developing their people into the best and brightest in the consulting industry.

## Diversity and Inclusion

L.E.K. thrives off a diverse and inclusive workforce that affirms and celebrates intersectional identities and lived experiences.

- Pride@LEK strives to make L.E.K. the most supportive and enriching firm for queer community members.
- Mosaic@LEK creates a welcoming community for individuals of racial and ethnic minorities through activities designed to foster awareness, support community engagement and share personal interests/goals.
- Women@LEK and Women in Business keep the conversation going on gender equality and addresses the issues faced by women across the industry.

Additionally, we are committed to empowering our women to be bold and brave leaders. Our *'Brave Women Leaders'* program supports our rising female leaders navigate barriers to leadership, provides inspiration for authentic leadership and fosters a supportive community of women.

## Associate and Summer Associate Roles

The Associate role is the focal point of the team, responsible for the research and analysis upon which each project is based. Case work may include developing a view of a future market, developing a valuation model for a company, or helping implement change.

Our 8–10 week Summer Associate internship provides the opportunity to collaborate with teams to transform research and analysis into thoughtful insights, delivering impact for our clients.

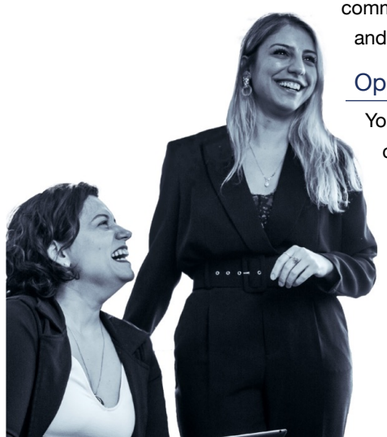
Look out for our Associate application opening in January 2024 for a March 2025 intake!

# McKinsey&Company

## Connect with McKinsey Australia

We work with companies across all sectors of the Australian and New Zealand economies on the issues that really matter — bringing McKinsey's distinctive capabilities and global perspectives to each and every client.

We serve clients at every level of their organisation, whether as a trusted advisor to top management or as a hands-on coach for front line employees. Our firm is designed to operate as one — a single global partnership united by a strong set of values, including a deep commitment to diversity, equity and inclusion.



## Opportunities

You'll work with talented and creative people, helping clients shape new perspectives and undertake initiatives that will transform their performance. You'll find that no two days will be the same — your working environment will be rich, multi layered, and always interesting. For those that graduate in 2023 or 2024, please apply for the Business Analyst(BA) role when applications open in January 2024.

## Diversity & Inclusion

We have an established diversity and inclusion strategy based on improving diversity and creating an inclusive culture for all colleagues. We have a number of active affinity and ally groups including our Asians at McKinsey network, GLAM network for LGBTQ+ colleagues, Access McKinsey and Reconciliation Action Plan group, which focus on connectivity and providing support to members of these groups. Our strategy is driven by key pillars including:

- Embedding D&I learning for all of our colleagues
- Regular communications to celebrate wins, acknowledge gaps and raise awareness
- Engagement of our leadership to build understanding of lived experience and actions they can take to support.

# S&C ELECTRIC COMPANY

Excellence Through Innovation

## About S&C

S&C Electric Company specialises in the switching, protection, and control of electric power systems. Our solutions are an essential part of the electrical grid that brings power to homes and businesses. Beginning in 1911 with headquarters in Chicago, the Asia Pacific business unit opened in 2013 with a head office located in Melbourne.

S&C works to understand local challenges within the region, developing technology and providing services to achieve reliable power that can reduce the duration of power outages from hours to seconds – or to no outage at all.

## Workplace Diversity

S&C's commitment to diversity, equity, and inclusion (DE&I) is rooted in our values and guiding principles. Each year, we strive to make substantive progress to inspire trust, teamwork, and belonging within our global workforce and the communities we serve.

Our DE&I Statement declares our dedication to advancing our journey toward a diverse and equitable workplace. The DE&I council in coordination with leadership and Human Resources create and implements DE&I roadmaps, programs, and policies, with a focus on five strategic areas:

- Organizational commitment
- Removing structural barriers
- Advancing DE&I education
- Enhanced talent-enablement processes
- Celebrating diversity

## Graduate Program/Internships

When it comes to supporting graduates, our philosophy is to provide a rounded learning experience that combines commercial, technical and leadership skills training with hands-on experience in delivering solutions that solve the challenges of our customers across the Asia Pacific region. **Come and join us as we transform the grid!**

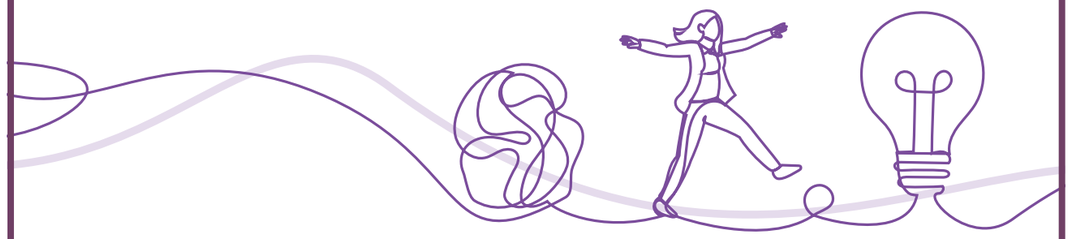
Students interested in an internship with S&C can reach out to APACGraduateProgram@sandc.com and submit an expression of interest.

WEM High Tea Networking Event



# Pioneering Pathways

## Celebrating Women in Engineering:



# Engineering specialisations



## Software Engineering– Natalie Law

My first experience coding was through a unit, ENG1060, which taught us how to code in MATLAB. I absolutely hated it. However, I came to appreciate coding after taking another unit, FIT1051. One of my favourite projects is this mobile app that my team and I developed that helps teach visually impaired people how to use android's text to speech function TalkBack. I find it super fulfilling cause before that I didn't know how I could use my skills to help those in need.



## Software Engineering– Jasmine See

I chose software engineering because I enjoy coding and the way of thinking when it comes to logic is different from other specialisations, such as civil or electrical. My favourite thing about this specialisation is that there are many ways to solve a problem and sharing ideas is really fun and a great way to learn from others as well. My favourite project so far has been an Elden Ring-inspired game for FIT2099.

## Materials Engineering– Nethmi Pallimulla

One of the main reasons I picked materials engineering was because I loved chemistry as a high school student and materials engineering had the most connection to chemistry. But three years on, what I love the most is the interdisciplinary nature of materials engineering. Not only do we cover various elements from other specialisations, I also get to learn about economic and geopolitical influences and impacts, all while keeping sustainability at the forefront.



## Materials Engineering– Ratu Ester Kelvin

I chose materials engineering because I always found it interesting to study the properties of materials and researching how materials can change very drastically with minimal alterations to their structural or chemical composition. My most favourite project/ unit so far was completing CHM2990, an introductory chemical research unit. There, I did a research project on phase change materials for storing renewable energy in battery cells, which involved a lot of material analysis.



## Civil Engineering– Shamilla Saputantrie

Witnessing how bridges, rail, roads, and buildings shape societies and improve people's lives has always fascinated me. I chose civil engineering due to my admiration for the positive influence infrastructure can have on people's livelihoods. My favourite part is when I use software like SpaceGass and 12D in class to solve practical puzzles relevant to the real world.I am excited to see the major transportation projects be completed and witness the positive social impacts and also excited to see how the industry evolves to make even more sustainable solutions.

## Chemical Engineering– Lilly Peng

I chose chemical engineering mainly because it lined up well with my science degree, given that science and engineering have many overlapping concepts. I had always had a leaning towards chemical engineering, but decided on it as my specialisation as I always wanted to work in food and because I quite liked my fluid mechanics class and fundamentals of thermodynamics. I most enjoyed designing plants; the design aspect of chemical engineering is interesting as it's where you can put your knowledge to the test. It was definitely the most challenging part, but it's the most hands-on, which is perhaps why I enjoyed it most.

## Electrical Engineering– Angel Aguinaldo

Electrical engineering always seemed to offer a good mix of hands-on experience and theory (and it's also a really cool specialisation). After enjoying a first year unit, ENG1013, I thought “why not give electrical a try?”. I initially chose software engineering, but as much as I enjoyed coding, I was feeling a little restless and wanted to do something more tactile. So, I switched to electrical since I really enjoyed being able to fiddle with circuits and arduinos in ENG1013. I’m looking forward to learning more and being able to do some cool stuff with the things I learn.

## Environmental Engineering– Emily Wu

My favourite thing about environmental engineering is that it is human-centric and multidisciplinary, combining elements of chemical and civil engineering, as well as various science fields such as geology and climate science. I have always wanted to do environmental engineering as it combined my passions for environmental issues and my interests in multiple science and even humanity disciplines. My passion for water issues came from my childhood spent in China, in a frequently flooded city with polluted rivers, where I witnessed the impact it has on human life. I found this degree to be perfect for combining science and humanity interests, and its core value of thriving to improve human life while making the world a better place really inspired me.

## Mechanical Engineering– Maya Wilmshurst

One of the things that pushed me towards Mechanical was how broad the opportunities seem to be within the field; there are Mechanical engineers doing everything from designing cars to researching fluid flows in the lungs. While I’ve really enjoyed the practical aspects of the degree so far, the WARMAN competition in Design 1 was a lot of fun. It pushed me to develop lots of new skills, even if it was a bit stressful! I’ve especially loved the more maths-focused units in Mech. Outside of the classroom, while I’m not super interested in cars, I’m hoping to pursue research opportunities particularly in fields at the intersection of Mechanical engineering and healthcare.

## Biomedical Engineering– Anastasia Kapeleri

I chose Biomedical Engineering because it seamlessly blends the subjects I enjoyed most in high school. Biomedical Engineering offered the perfect combination of my interests, allowing me to utilise the principles of engineering to innovate and improve health outcomes. My favourite thing about my specialisation is the diversity of my course map. My course map consists of units from Biomedical Sciences, Mechanical Engineering and Electrical Engineering. This broad spectrum of units is what makes this course challenging but in the best way possible. I am looking forward to delving deeper into my units, understanding the intricate connections between them and seeing how everything comes together.

# Women in leadership in student teams & clubs

Student teams and clubs officer & ex CEO of Monash Nova Rover

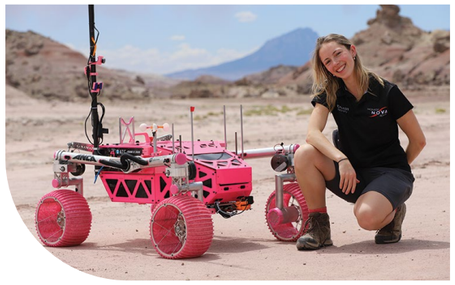
## Bec Leith

**Q** **Tell us a bit about yourself.**

**A.** I'm an undergrad at Monash, studying Mechatronics Engineering and Chemistry. I'm a social person and love working in teams. I'm in my fifth year of uni and I hope to enter the space industry after graduating.

**Q** **Have you always wanted to be an engineer?**

**A.** No, I wasn't at all interested in Engineering until I joined the Nova Rover team in my second year of uni. I didn't really know what engineering involved and heard it was really hard so never had much interest. I was studying Chemistry when I joined the Nova team and I applied those skills for the team but quickly found myself learning other skills such as CAD, 3D printing, soldering and circuit design. It occurred to me that these were all Engineering skills and I really enjoyed them. This brought me to realise I like Engineering and so I enrolled in the degree.



**Q** **How has being a part of Monash Nova Rover helped you grow as an engineer?**

**A.** Not only did Nova Rover help me discover engineering but it has given me a safe place to learn rapidly, make mistakes amongst friends and embark on really exciting projects. I think student teams are the best place to fall in love with Engineering and ultimately become an Engineer.

**Q** **Have you participated in any initiatives or programs aimed at encouraging young girls to pursue STEM fields? How do you believe we can inspire more girls to enter the engineering profession?**

**A.** I was unfortunate to not receive any introduction to Engineering in school and now that I love Engineering I feel it's my duty to prevent this from happening to other young girls in Australia. I started a women in STEM initiative at Nova Rover in which we visited lots of girls' schools and developed a new hands-on robotics workshop that gives students an introduction to a broad range of Engineering skills.

To further this work done on the team, I partnered with Chloe Chang in leading the Pink Rover Campaign. We made our 2023 competition rover bright pink to start conversations about women in STEM. We wanted to empower the next generation through education, highlight the women in STEM in our community and address the barriers and biases that prevent women from entering or staying in STEM fields. These three missions were what we believed would encourage more girls to enter the engineering profession. We have seen great success in the 6 months since our Pink Rover Campaign went live, we believe our missions are being achieved and we hope that everyone in the STEM community and beyond will see this as a motivator to begin their own campaigns - or at least conversations (whether that's with one's own family, friends or colleagues).

Women in Engineering student teams & clubs leadership – Bec Leith



# Women in leadership in student teams & clubs

Engineering Lead of Monash High Powered Rocketry

## Ranuli Illankone

**Q** **Tell us a bit about yourself.**

**A.** I'm currently in my final year studying Mechatronics and Robotics engineering. I have always loved anything related to space and have been keen to explore how I can use the skills I learn in my degree in the aerospace field. I joined Monash HPR as a part of their Dynamics team in 2021, moving on to take up the role of Project Lead in 2022, and am currently the Engineering Lead for the team.

After working in the position for a year and a half, I was promoted to Senior Consultant.

**Q** **What inspired you to choose engineering?**

**A.** I always enjoyed studying science in high school but never seriously considered engineering until my final year studies. The practical, problem-solving aspects of engineering interested me, and I really wanted to explore what pursuing engineering would look like at uni. Now, 5 years into studying my degree, I love studying mechatronics engineering and I am excited about the prospect of going into industry and putting all the skills I've learned to good use.

**Q** **What's been your greatest achievement as part of Monash HPR?**


**A.** My greatest achievement during my time at HPR has definitely been the experience of being Project Lead for a competition rocket. As the technical lead for Project Valkyrie, Monash HPR's entry into the 2023 Spaceport America Cup, I took on the challenge of overseeing the project from conception to completion. Despite the unforeseen manufacturing issues and tight timelines, we were able to successfully launch and we were able to place 3rd in our category and 7th overall in the competition. This was a significant achievement and I am very proud not only of the great team I was able to work with, but also be able to contribute in such a significant way to the legacy of the team.

**Q** **In your opinion, what is the significance of having more women in engineering?**

**A.** I believe it is really important to improve the gender ratio of women to men in engineering, especially as it brings more diversity in perspectives but also provides a platform. Through my experiences as a girl not only in engineering but also within a student team, I've met so many bright, capable and extremely smart women who are also paving the way forward for future engineers. Having more women in engineering not only helps bolster a stronger sense of community and kinship for the girls who are studying engineering but also provides opportunities to bring strong engineers to the workforce.

Women in Engineering student teams & clubs leadership – Ranuli Illankone

# Insights from Women in WEM

While women make up close to 50% of the workforce in modern Australia, in the field of engineering, especially when compared to other STEM fields such as the biological sciences, women make up around 16% of university graduates, with only about 13% ending up in the workforce, according to Engineers Australia [1]. The reason for this statistic varies encompassing a hesitancy to enter these fields due to little information being pushed to women and lack of femme representation, all the way to fear of unequal opportunities in workplaces and industry, for graduate engineers [1]. In an especially male associated field such as engineering, the importance of female representation is even more important, to foster a sense of community and support between female engineering students and between the engineering industry. It is on these pillars that Women in Engineering at Monash (WEM) was founded in 2012.

WEM is a student-run organisation focused on empowering women and fostering interpersonal relationships and networks between engineering students, prospective students and the engineering industry. The current 2023 committee is dedicated to upholding this beacon, and some members have shared their experiences as members of WEM and as women in engineering.

## Naree Khuon

**What are you studying and what year are you in?**

First year Engineering (Honours)/Biomedical Science

**What has been your experience as a woman in engineering? What sort of things have you learned, seen, experienced, loved or hated?**

My first year on the committee has been so fun! I've met so many new people and was given the chance to reconnect with some familiar faces from high school. The community here is full of kind, warm and intelligent girls who are willing to embrace their journey - a sentiment that I love!

**What is something you've learned from being a part of WEM, perhaps about being a woman in engineering?**

Being a part of WEM has been a good challenge for me to balance course work with club work. Being in uni can be a little confronting at first but with the support of many, it's been a great journey so far. My experience as a woman in engineering has only been made all the more special through the friends I've made in this club. WEM has truly reinforced that experiences are made better when you have people to share them with.

**How has your experience in WEM prepared you for the industry?**

WEM has cultivated a great environment for making connections in the engineering industry. Being able to network through events such as trivia night and high tea has encouraged me to step out of my comfort zone and put myself out there to company representatives. It's daunting at first - especially as a first year - but eventually, you become more and more confident with facilitating conversations. The industry events have also been such a great way to take a break from my studies!

**What has been your favourite thing about being a part of WEM?**

My favourite thing about WEM is the leadership experience I've gained! I was slightly hesitant to apply at first but I'm so glad I decided to give it a try. It feels special to know that I'm actively making a meaningful contribution to the engineering community as a first year rep.

**If you have any advice for young girls interested in engineering, what would you say? Or what would you tell your younger self about engineering?**

My advice is to surround yourself with people who make you happy! Think about who encourages you to do better and who inspires you to become the best version of yourself :)

## Shamila Saputanrie

**What are you studying and what year are you in? Why did you choose your specialisation?**

5th year Civil Engineering

**What is your favourite part of being a member of WEM?**

My favourite part of being on the WEM committee is seeing the positive impact of our efforts. It's really rewarding to see an event that you and the team have put a lot of effort into, bringing diverse people together and allowing them to bond over shared experiences.

**How has being on the WEM committee impacted you professionally?**

Organising such events has helped my professional self too, as it has developed my prioritisation, communication and organisation skills. I've become less shy when bringing forward ideas and become a more confident self by leading a team.


### References

> 1.Romanis, J. (2022, June). Women in Engineering [Review of Women in Engineering]. Engineers Australia. https://www.engineersaustralia.org.au/sites/default/files/women-in-engineering-report-june-2022.pdf




# Former Members from WEM

## Claudia Yuan

**President of WEM 2021**

**What have you been up to since leaving WEM?**

I finished up with WEM at the end of 2021. Over that summer break, I did a 3 month internship at GHD as a Mechanical Engineer in the Building Services Engineering team. Then I completed my penultimate year of engineering and biomed double degree. In semester 2 of 2022, I began my FYP with CREATElab, which involved testing artificial heart valves in a lab. I was lucky enough to conduct my FYP at the Baker Heart and Diabetes Institute in Part A, then we moved to the newly built Victorian Heart Hospital next to our Monash Clayton campus for Part B. I also managed to squeeze in a quick solo trip to Europe! At the end of 2022, I got involved in the Vacation Program at Invetech, in their Cell Therapy team as a mechanical engineer. I finished my degree mid-2023 and then began the Graduate Program at GHD.

**How did being the president of WEM aid you in your engineering journey?**

In my role as president on WEM I gained so many valuable interpersonal skills and transferable skills, which were super helpful through the rest of my engineering degree and beyond. The experiences also helped me feel more confident in interviews and made for a smooth transition into industry. I also attended lots of industry events that we ran and formed networks with industry representatives. The conversations I had with them helped me gain a better insight into different engineering companies and the types of roles in industry, which led me to discover my interests in my future career in engineering. Furthermore, during my time at WEM I felt a strong sense of belonging in the community of women in engineering. My involvement in WEM is one I continue to cherish!

**Now that you've graduated, what are you looking forward to in the future?**

I'm really looking forward to what lies ahead in my mechanical engineering role. There's been some super cool projects going on and more to come in the future. It's a rewarding feeling being able to apply both the technical and transferable skills I gained from uni to real world work. I'm also excited to have the liberating feeling of not having to worry about studying and assignment submissions – once you begin full time work, you get your weekends back yay! Outside of work I'm looking forward to spending more time with friends and family, playing social netball and volleyball, going to the gym, and getting back into reading books.

**What advice would you offer to current university students?**

Embrace all the opportunities that come your way! Get involved with student clubs, teams and societies – you'll make new friends, have fun experiences, and gain valuable skills that could take you a long way in the future. Be sure to keep a holistic balance between study, work, co-curriculars/hobbies, and downtime for rest. Towards your penultimate year, apply for any internships that interest you. Attend industry networking events to learn more about what's out there. As an undergrad, it's the perfect time to try different things and discover what is or isn't for you. Although uni gets challenging sometimes, you won't regret putting your best foot forward. Look after yourself and good luck!

## Renee Meaney

**President of WEM 2019-2020**

**What have you been up to since leaving WEM?**

Since leaving WEM I've done a geotechnical internship at GHD, then I graduated and have started my graduate role at Viva Energy Australia. My role at Viva Energy is to design the major maintenance of the fuel systems at the Shell service stations. In my personal life, I moved out of the city, started running as a hobby and got a puppy. I recently also got involved with the Women in Engineering committee through Engineers Australia where we run similar events as WEM but for everyone from engineering students and graduates to highly experienced engineers.

**How did being the president of WEM aid you in your engineering journey?**

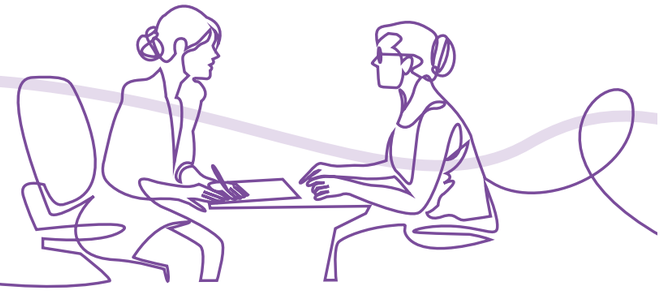
Being president of WEM helped me network and understand the different engineering industries and the companies within the industry. Both of my internships came from companies who sponsored WEM at the time. Being involved in any club or team at uni will look great on your resume when you're looking for graduate roles or internships and that was definitely true in my situation. WEM also helped me make lifelong friends with the other committee members, and they are now my go-to women when I'm seeking advice.

**Now that you've graduated, what are you looking forward to in the future?**

I'm looking forward to growing my skill set to be more industry and discipline specific. It's also very exciting seeing the projects that I design come to life and I look forward to understanding more about that process. I'm very excited to simply explore what options are available to me because I'm always curious to learn more. I am so grateful to be surrounded by experienced people who I can learn and grow with.

**What advice would you offer to current university students?**

I'd recommend getting involved in clubs and teams at the university. These are a great way to build your soft and technical skills as well as building relationships with the people who you work with. I'd also recommend applying early for internships; even if they specify the penultimate year, they sometimes accept students earlier in their degree programs. Furthermore, when applying for internships or grad programs, using job boards like GradAustralia and the Young Engineers Job board by Engineers Australia are great resources. I'd also suggest applying to a lot more roles than you expect, because often there are 1500 applicants for 15 roles so it's all a bit of a numbers game, and it's better to reject roles if you have too many offers than to not have any options.



# Celebrating and Respecting Women Engineers

Entering my first engineering class had been one of the most intimidating experiences of my life. There were men surrounding me, which made me slightly uncomfortable, but upon scanning the room, I saw another woman sitting across from me. Immediately, I joined her, knowing that I would feel a stronger sense of belonging and more at ease.

In the next few weeks, I met more women in engineering and I began to feel that I was in a community of women engineers. Hence, I was able to reach out to them comfortably. I was able to voice my thoughts and opinions without being judged which was one of the best parts about being part of WEM.

When I applied for first year representative at WEM a year ago, I did not realise that voting finished at 12 pm that very day. So, I waited till class was over (11:55am) and then I ran to the science lecture hall. Even though it didn't look like I would make it in time, I was so determined and driven to make it just before voting had closed. As I ran into the hall, I saw all these women in engineering and I automatically felt that sense of community and belonging. It made me realise that we are all in this together. At the end of last year, I tried out for marketing director. I wanted to be someone who could make that positive impact on society by challenging the stereotypes. By posting our industry, social and academic events and our sponsorship events on socials, I knew that I was fostering a community to stick together till the end.

We celebrate women in engineering to spread awareness and equality about the fact that even though engineering is a male-dominated degree, us women can also do it too. We can follow our dreams regardless of the stereotypes that entail in the degree. With this, there are a few events that follow into recognising the women engineers but the main one is International Women in Engineering Day.

International Women in Engineering Day recognises and celebrates the hard work of women engineers. Previously, it was hard to fight the stereotypes of only men being good engineers but, in this generation, the achievements, recognition and hard work that women engineers do has proved otherwise. This event encourages women to pursue a career in engineering and aims to celebrate the achievements of women engineers, by fostering a community where women can achieve and showcase their potential with the opportunity to work in a company that actively seeks women engineers. Joining WEM at the start of last year was one of the best decisions I made because I felt seen and heard.

The Industry Guide Launch is WEM's biggest event of the year and our chance to celebrate and show our respect to all women in engineering. At our Industry Guide Launch, you will be able to talk and connect with all our sponsors and companies who all actively support women engineers in the industry. Thanks to them, the employment rate of women in engineering has significantly improved and they are actively seeking for more women engineers to go into the workforce. Hence, the percentage of women doing engineering has improved by a significant amount and will more greatly improve in the future.

**Ashali Haputhanthri –** Marketing Director



# Conversations with Catalysts

## Interviews with Women in Engineering:

# Elizabeth Zavitz:
Senior Lecturer - ECSE Department

## Undergrad

**Q What did you do for your undergrad studies?**

A. I knew I wanted to do computer science - I was into programming, I liked playing video games and I've always liked combining creative work with technical skills. I chose to specialise in cognitive science because it sounded the coolest. Turns out computer science itself is really boring!

## PhD

**Q In that case, why did you choose to do a PhD?**

A. My family and friends always saw me as the absent-minded professor type. I actually started my PhD in vision science mostly because I was good at programming and keen on understanding how brains process visual information, by making computer models of neurons and their responses to what we see.

**Q Do you think it's important to have research experience before starting a PhD?**

A. Research experience is mostly useful if, like mine, your grades are fine but not excellent - potential advisors look for this. It's not uncommon for high-achieving students who go straight into PhD programs to struggle because they just don't know what they're getting into.

**Q Why do you think the transition from undergrad to PhD so tricky?**

A. All of a sudden you're on a 4-5 year schedule! Also nothing is ever "done" - since the day I started grad school, my to-do list has never been complete. Ever. Some people find that uncertainty really stressful.

**Q Were there ever any points in your PhD where you lost motivation?**

A. Not really - I had a great advisor and group of friends and post-docs in my department. If things weren't going well, at least I was having a fun time with friends!

**Q Did you work during your PhD?**

A. I chose to TA for a few semesters just for the experience (and a bit of extra money). I was living in Montreal at the time and it's probably the best place to live around the poverty line as a student – it's a lovely place and all the fun stuff is free!

**Q When did you decide to move to Australia?**

## Moving to Australia

## Moving faculties

A. In the final year of my PhD I decided I'd only apply for post-docs in places where it didn't snow! I was offered a job at Monash and I've been working in the physiology department for 10 years but I'm moving to engineering this year.

**Q What's it been like moving faculties?**

A. It's been quite easy because I've never really fit in; in a given room of people I'm always the most biologically minded technical person or the most technical biologist. It also helps that I'm greedy for new learning experiences - moving departments is a great way to get that.

**Q What was the main inspiration for you attempting to start your own lab in engineering?**

A. Vision scientists tend to be scattered across a family of departments so engineering has always been on my radar. I was also keen to do some more teaching because I also really like education design; introducing people to new information.

**Q How do you manage your time with so much going on!?**

A. Things either don't get done or they aren't done well. The less pessimistic answer is I decide how much time to spend on something and that's it. I could easily spend hours preparing my resources for teaching so I have to consciously allocate myself research days. Parenting has also changed the way I work. I can no longer go home after my workday and continue to code or read when my 2 year old wants to play with trucks!

## The Future

**Q What are your main pieces of advice for younger women looking to pursue a career in STEM?**

A. I've got two – one that I hear a lot and one that I don't hear often at all.

Firstly you don't need to meet every requirement for a position, scholarship, job etc. Always aim high and make them negotiate down if necessary. I think part of the problem is that women are socially conditioned to want to avoid being a hassle.

The other thing I'd suggest is to make other people tell you "no". If people really believe you don't belong somewhere, make them say it! Invite yourself to work drinks! Invite yourself to meetings! It may be uncomfortable to start, but I promise it gets better.

## Kelly Tan: 3rd Year Student
Studying Software Engineering and Business Analytics

**Q** **Firstly, can you please introduce yourself and share what motivates you to pursue your Bachelor of Engineering, as well as some of your interests?**

A. Hi, my name is Kelly, and I'm a third year student studying Software Engineering and Business Analytics. I was drawn towards studying engineering as I've always been very interested in building things, and my hobby when I was a little kid was building Legos. In high school my favourite subject was maths because of how satisfying the problem solving aspect was for me.

Outside of uni, I love to bake - I run an online bakery with my mum where I sell Malaysian pastries to customers mainly through Instagram and Facebook. What I love most about the job is making customers happy and receiving positive reviews, which can make me happy as well. It also helps me to destress especially considering that Engineering can be a stressful course.

**Q** **I would like to know more about any non-technical skills or insights that you've gained from your study so far and how have you applied them into other areas. Are there any skills that you've developed through your engineering degree that you've been able to apply in a more broader sense, or that you think might be useful for the future?**

A. In engineering, there's a lot of projects revolving around problem solving. So I've definitely improved my problem solving skills through all the projects that I've done. That's really important for my future career as a software engineer, in which I will have to solve problems every day. Other than that, I feel like balancing both a challenging degree and extracurriculars has helped me improve my organisation skills, because there's a lot to get done - not just study, but also extra-curriculars.

**Q** **Do you feel like balancing all your exciting commitments has challenged you with your organisational skills?**

A. Learning how to manage my time has been so important so I can enjoy other aspects of my life outside of engineering. Coming from high school where all I did was study, I wanted to experience things in uni. Not just studying for a degree, I want to have a community, I want to pursue my interests, and I want to have a job. And there's a lot more things I want to do. There was definitely a conflict of interest.

In my first semester of uni, I was actually struggling with time management. Through that, I learned how to be on top of things and had to find ways to make sure that I get things done so that I could also have a social life and have a community outside of just my degree. It was very tough.

I was really struggling because I would get stressed and burnt out, affecting my productivity. I finally managed to solve this problem when I started writing to do lists at the start of a week. It really helped me a lot to get on top of everything. As a result, I was able to fill in my time with other stuff as well, like being in a student team.

**Q** **Although you joined recently, could you tell us more about your experience with MCAV and what inspired you to join a student team?**

A. In every stage of your life, you could have different priorities and it really depends on what these are. Right now, I am thinking more about my career, which is what led me to join MCAV. Student teams replicate the industry on a smaller scale, because you get to work on projects with other people across different disciplines. The reason I applied specifically to MCAV is because I've always been really interested in their projects. And so when I saw that they were hiring for a software developer role, I thought it sounds really fun. I also want to learn how to work with others on projects and work with people from other disciplines as well.

**Q** **Have you encountered any challenges or biases as a woman studying engineering?**

A. Yes, when I was in high school, all my friends were female. When I joined engineering, it was a very huge transition for me because of the predominantly male environment. So I had to really learn how to work in that environment. It could be daunting at first being the only woman. Even just two days ago, I went to my database class and I happened to be the only girl in the room that day - usually there'd be 2 or 3 girls.

Most of the engineering groups I've been in have been predominantly male. In general, I'm not a very straightforward or extroverted person, but what I've found in working with predominantly male teams is that you have to be very straightforward.

I learned that during one of my group projects where they just didn't let me do work at all. I was working with 2 other guys, but one of the guys took over the whole group project without any sort of communication. We couldn't change groups at all so I had to make sure that I get good grades because I still want to do well.

That experience made me realise how important it is for me to be straightforward and voice out. Team members might think that they're right all the time, especially when you don't voice out your opinions and concerns. It's really important to be like, "okay, I'm going to take responsibility, I want to do this… Let's discuss. Let's have a meeting," and step up to lead the team. It's good to have female leaders as well. I feel like in my culture it's expected of women to be more quiet and reserved, while guys are encouraged to be leaders.

Being very straightforward and voicing out your opinions is so important especially in environments where you're the minority.

**Q** **It's great that you were able to turn that experience around into an opportunity to grow. Did this growth help you in other areas?**

A. Before taking that unit, or even before starting engineering, I would never have thought of myself as a leader, or want to be in the spotlight. That experience made me ready to communicate effectively and be more straightforward. I feel like I could lead a project and communicate with others, and I think that's really important in the future too. My future workplace could be predominantly male like my team and that could partially reflect what my future looks like. That really helped me because I learned that I need to stand up for myself and voiced my opinions.

**Q** **Following up from that, how important do you think it is to have that sense of community with other women studying engineering?**

A. I think it is really important. Especially in engineering, the proportion of males and females is very imbalanced. It's easy to feel excluded in classes where I'm the minority, and I feel much safer with my female friends and we can support each other and make our community bigger so that our voices can be heard.

**Q** **Are there any mentors or support networks that have helped you grow academically, professionally and overall?**

A. In 2021, I went to WEM's High Tea Networking event. Back then, I was in my first year and was really unsure about where I wanted to go with my degree specifically. Thanks to that, I was able to develop ideas of where I'd want to work. I was talking to company reps who were talking about their roles as project manager and what their responsibilities and day-to-day life would entail. This event gave me a lot of clarity going forward in my degree.

**Q** **To any women in engineering, reading this article who might be considering joining a student team, or starting a business, but something is holding them back or they're doubting themselves, what advice would you give?**

A. Never doubt your ability. It never does any harm to try something.

I know first-hand that impostor syndrome really makes you stop doing things that you're capable of. It's so important to actually take that step and you could achieve things that you never imagined. Even joining a student team, I doubted myself alot but it really challenged me to go out of my comfort zone. Even if you feel that imposter syndrome, just go ahead and take the step.

## Elahe Abdi: Senior Lecturer
Department of Mechanical and Aerospace Engineering

**Q** **Please briefly introduce yourself. Name, current occupation, hobbies and interests.**

A. My name is Dr Elahe Abdi, a Senior Lecturer at the Department of Mechanical and Aerospace Engineering, Monash University. I am a Roboticist, an expert in human-robot interaction and shared autonomy. My job is to address the labour shortage using cutting-edge robotics and artificial intelligence technology. In collaboration with hospitals, marketing experts, and civil engineers, I lead the design, development, and testing of robots and programs that can interact or even collaborate with humans in medical, construction and service industries. My research helps workers to focus on tasks that require their unique human attributes while leaving some of the potentially dangerous or repetitive tasks for robots to do.

So, with the help of technology, we can leverage automation to achieve more with less human workers. My surroundings inspire me to make discoveries both in research, through scientific explorations, and in life, drawing inspiration from travel and new experiences.

**Q** **What was your journey studying engineering like? What made you pursue higher research and now teaching?**

A. I was always fascinated by the application of maths in physics which encouraged me to do my B.Sc. in Mechanical Engineering. For M.Sc., I chose Biomechanical Engineering as it offers multidisciplinary insight into human-centred application of mechatronics, understanding human physiology towards engineering solutions for medical applications and beyond.

My strong desire for tackling new questions and discovering answers motivated my PhD studies in robotics. After joining Monash, I established the Robotics in Medicine and Interaction Laboratory to which I brought together a fantastic team of undergrad and postgrads tackling fascinating research questions

In this academic role, my passion for research has aligned nicely with my other interest which is teaching. Even as a child in primary school, I often found myself teaching maths to some of my classmates. This continued in high school and later as a teaching assistant in my undergraduate and postgraduate studies. And now here I am, teaching two core units in the Robotics and Mechatronics course at Monash.

**Q** **You seem to be very busy with a lot of projects around the place! What does a day in the life look like for you?**

A. On the research side, my day is filled with lots of reading, brainstorming, and writing. This includes meetings with my team members, collaborators, and stakeholders, tackling research questions using theory and experiment, and disseminating the findings in scientific publications and presentations. In parallel, I design unit material, assessments, feedback and communication strategies in teaching. My units are delivered in large classes with an engaging and hands-on approach. Being passionate about encouraging more diversity and inclusion in engineering, I also lead broad engagement activities at Monash and beyond.

**Q** **Could you elaborate on one of the projects that you're working on now?**

A. My main research interest is in human-robot interaction, specifically focusing on applications where humans and robots collaborate and are in close proximity to each other, leading to research in effective user interfaces, and novel perception, control, and learning techniques. One example application is in surgical robotics, where we use robots as assistants to the main surgeon. If implemented effectively, robots can make the main operator more autonomous and dexterous, resulting in safer and more efficient surgeries with fewer human assistants. This will empower healthcare workers to dedicate their time and energy to the tasks that require their expertise in a tight labour market.

**Q** **Superstar of STEM. Women Leading Tech Finalist. ICRA Invited Speaker. All these awards in 2023 alone, is there anything you want to do next? What are your goals for the future?**

A. My goal is to positively contribute to society with scientific breakthroughs and train the next generation of engineers and researchers in Robotics, leading to my vision of a more diverse and inclusive workforce with the help of technology. My mission is to educate future engineers and leverage my expertise in automation towards safer and more efficient procedures in manufacturing, construction, and medical applications. While awards and recognitions can boost one's efforts, they are not the goal.

**Q** **I see that you've now studied and lived in multiple places around the world, how has your experience as a woman changed both with place and time?**

A. Having studied and worked in four continents has opened my eyes to the need for increased diversity in engineering across the board. There is a positive trend in introducing engineering as a possible option to a wider population in the society but there is room for improvement. One day, I hope to see diversity in engineering, reflecting the diversity in our society. In engineering R&D, it's essential to ensure that products/outcomes meet the needs of all end users.

**Q** **It's clear that women belong in the engineering field. What do you think are the underlying reasons causing low levels of women to pursue an engineering career and what can we do about it?**

A. I believe that there are low levels of women pursuing engineering due to the notion that 'you can't be what you can't see'. One way to attract more women to engineering is to increase the visibility of those who are already active in the field. This helps with both career progression of women in engineering, and encouraging more women to consider this field as a viable option for their studies and future careers. This is what Science and Technology Australia (STA) aims to do with programs such as the Superstars of STEM and STEM Ambassadors.

Thank you for your time! One last question,

**Q** **What advice would you give to young women who want to consider studying engineering in the future?**

A. I would simply say if you like it, go for it! Engineering offers such a wide range of career paths that you can really become anything you aspire to: you can end up in a 9-5 job in a large company in Melbourne CBD or you can choose to become a fly-in-fly-out (FIFO) engineer in a mine or in the outback. You can work in almost any industry and make a positive contribution to the society. Just follow your passion and work hard; the sky is the limit.

## Hannah Slade:
Senior Consultant at a Management Consultancy

Hannah graduated with a Bachelor's in Materials Engineering and Commerce from Monash University in 2021.

Currently, she works as a Senior Consultant in the Supply Chain & Operations team at a management consulting firm. During her university studies, Hannah worked at a medical technology company in the Hardware Engineering team and at a telecommunications company as an Engineering Assistant.

**Q Can you share your career path from studying engineering to becoming a senior consultant at a big four consultancy? What pivotal moments shaped your journey?**

A. During my degree, I did a 4-week project in Malawi looking at solar energy in remote communities. I applied for several internship programs but was unsuccessful, so I attended a presentation organised by MYMI (Monash Young Medtech Innovators) which was held at a med tech company.
I introduced myself to the presenter and emailed them my resume that week.
I worked at the med tech company for over a year while I studied. My time there and in Malawi was pivotal in building my confidence and believing in my ability. I applied for graduate programs the following year, receiving an offer from my current workplace where I went on to work in the Supply Chain and Operations team.

After working in the position for a year and a half, I was promoted to Senior Consultant.

**Q In what ways do you see the skills and mindset cultivated in engineering contributing to your success in the consulting field?**

A. Consulting is often considered a "business" industry, however, it was the skill set I developed from my engineering degree that prepared me best for the job. Engineering gives you problem solving expertise. For example, the way we are taught to run an experiment; the planning, the conducting, the analysis, and investigating the reason results are not as expected. I have found all these skills to be extremely beneficial at work. You will rarely learn the exact theory at university required in a consulting job. Undertaking engineering teaches you how to approach a problem or a project - which is so important.

**Q What unique perspectives do you think women engineers bring to the consulting industry?**

A. It is very exciting to be part of a community of women in the workforce that support and empower each other and broader diversity. I have been lucky enough to work with people that share stories and experiences and I believe that as a woman, that can be very powerful. Understanding what others have worked through and overcome can help you rationalise your own thoughts and learn new techniques. The women I am surrounded by bring empathy, emotion, passion, encouragement, and thoughtfulness to their work.



**Q What advice would you give to women engineering students who are interested in pursuing a career in consulting or a similar industry?**

A. Don't be afraid to reach out and organise an informal meeting with someone you admire to ask questions and determine if their work aligns with your interests and values. I recently heard a statistic that reported "men apply for a job when they meet only 60% of the qualifications, but women apply only if they meet 100% of them". If you don't reach out to that person or apply for that job you want but think you won't get, someone else will message and someone else will apply and someone else will get that job. It is always worth a shot. I got rejected from a lot of internship and graduate programs, but it's all part of the process; focus on what you can take away from each experience.

**Q How do you handle situations where there might be resistance to your ideas or expertise due to gender biases, and what advice can you offer to overcome such challenges?**

A. I have been lucky in my professional workplaces, I feel my ideas are valued. I have experienced times where louder voices can drown me out which has previously led to me taking a step back. It is important for you to build your confidence so you can react to instances of undermining behaviour or bias in a way that will help you and the next woman that comes after you. For me, it is having conversations with people I trust about these situations, so I can understand the core issue and address it front on. Educating and correcting is vital in those moments to break the cycle.

**Q How do you foster a collaborative and diverse environment within your consulting teams, drawing on your experiences as a woman engineer?**

A. In my early years of university, as a woman in a male dominated group, I lacked a lot of confidence in my ideas. This shifted when I worked with people that asked for my opinion and made me feel valued. I believe when you do this, you encourage a diverse group of people to share their voice without fear of judgment or rejection. This is where the most impactful, creative ideas come from. It is important to have a healthy debate in team environments, but I believe that for it to be healthy, all contributors must feel safe, comfortable, and respected.

**Q Looking back on your career so far, what achievements or milestones are you most proud of?**

A. I am most proud of my ability to prioritise my mental health and my personal and professional relationships. I like to be very open about mental health and well-being and always encourage people to do the same if they feel comfortable. In professional workplaces, it can be easy to take the emotion out of work, but without that, it can be difficult to build meaningful relationships. I used to think that showing my emotions made me look less professional, but I believe it is a strength. I also believe it promotes trust, authenticity, and courage. My relationships at work are what I value most about my job and it is what keeps me motivated.

# Breaking the Mould

## Women's Journey in the Engineering World:





# Navigating Success: Signs of a Supportive Workplace for Women Engineers

As the engineering industry continues to flourish, a pressing need arises for diverse and inclusive work environments that harness the full potential of all professionals. While women have made remarkable strides in engineering, businesses have ground to cover in terms of achieving gender positive workplaces.

From initiatives that promote mentorship and skill development to policies that address work-life balance and family positivity; identifying these signs will help aspiring women engineers find workplaces where they can not only build impactful careers but also play pivotal roles in shaping the future of the industry.

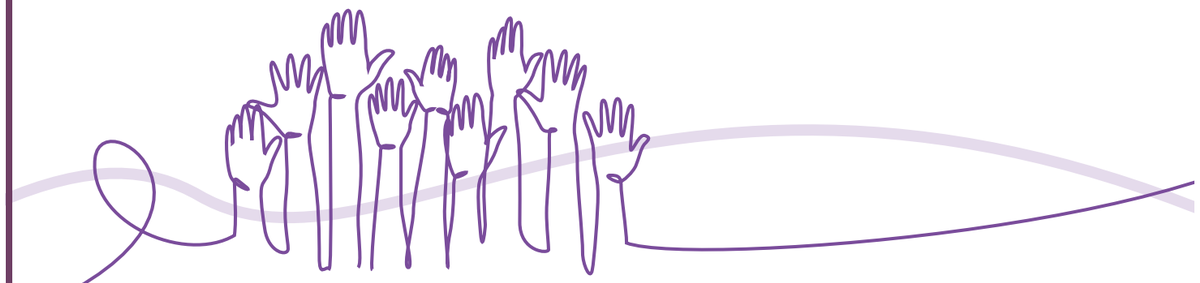
Powerful indicators of a workplace committed to true gender equality are the initiatives and programs they have in place to boost the representation of women and propel them to leadership positions. This could range from women in leadership forums to launching targeted email campaigns aimed at encouraging female employees to step into leadership roles. Furthermore, businesses that acknowledge the disparities that often exist between the number of women and men applying for the same positions, addressing the common phenomenon where women tend to undervalue their qualifications. Another thing to lookout for is the presence of dedicated mentorship programs, aimed to provide support and navigation around the challenges of being a woman in STEM.

While a diverse entry-level workforce is a positive sign, the true measure of a company's commitment to diversity lies in the composition of its leadership. By ensuring that women engineers are not only recruited but also cultivated into leaders, businesses can exhibit their understanding of the multifaceted benefits that diverse leadership can bring, from enriched perspectives to more innovative solutions.

Many engineering workplaces are years behind in their procedures to accommodate working mothers. Look for organisations that understand the unique challenges of this, offering flexible working hours that encompass school pick-up and drop-off times. Such policies dispel any notion that women's dedication to their careers should be measured solely by their presence during traditional office hours. This also relates to parental leave. Businesses that embrace the principle of equal paid parental leave, irrespective of gender, acknowledge the importance of shared caregiving responsibilities. Moreover, workplaces that take a step further by providing in-house childcare facilities or childcare benefits are creating environments where all workers can excel without compromising their family commitments.

Another telling aspect of a supportive workplace is its endorsement of reduced workloads without sacrificing career growth. Companies that actively encourage all employees to take on a 0.9 or 0.8 workload recognise the traditional role of women to take on less work for familial commitments. Such initiatives ensure that women engineers are retained longer in industry, and not placed at a disadvantage when being compared to their male counterparts.

As we students look to industry, do not be afraid to ask questions of the workplaces that peak your interest. Inquire about their specific efforts in addressing gender inequality in engineering, and look for inspiring women leaders within the business. Challenging the engineering industry will continue to make each workplace better for future women engineers to come.



# The Impact of Female Representation in the Engineering Industry

To reinforce that women are underrepresented in the engineering industry is an understatement. Although women in these roles wield impact and inspiration to female-identifying individuals, it’s important to recognise the enduring bias and prejudices which they face.

Formidable challenges are vastly prevalent for women in the engineering industry. Gender biases and oppressive stereotypes bound women to what is known and conventional - often undermining their potential to succeed and hindering their career progression. Unconscious bias - often manifesting into subtle microaggressions and assumptions - pervades the workforce and can relate to one’s marital status, physical appearance and subject matter proficiency[1]. In the last two decades, 40% of women engineers have left the engineering field. With 1 in 4 women engineers leaving after the age of 30, it’s important to recognize the immediacy of this issue and how actions need to be enforced to cultivate a more equitable and safe engineering field for women[1]. It’s also worth noting that unconscious bias is not only limited to women but rather all gender identities and transcends beyond the engineering field. Obstacles such as the persistent gender pay gap and violence against women in the workforce is ultimately perpetuated by discrimination and double standards. To truly reshape norms in the workforce, these obstacles must be overcome by not only cultivating greater social awareness from the public but also a pressing commitment to gender equity.

As the engineering industry is constantly attuned to the adapting needs of society, diverse leadership is the key to drive innovation and foster effective collaboration in the workforce. Likewise, women leadership cultivates a rich diversity of perspectives by engendering an equitable environment; this is especially important as the engineering industry thrives on adaptation to stay accustomed with industrial advancements and the technological and mechanical needs of consumers. Instilling this culture will show that the industry is not bound by the limitations of its past but rather is propelled forward by diverse leadership.

The 6% global increase in female-identifying engineers serves as the quintessence for developing and sustaining an equitable and diverse work culture[2]. Pre-existing women leadership ultimately inspires the next generation of engineers - penetrating social paradigms and stereotypes that hinder one’s potential to succeed. Whilst I aim to draw a powerful emphasis on the importance of female representation in engineering, it’s important to recognise and acknowledge the bigger picture: that embracing all gender identities in all domains of life is the most holistic approach to engineer a better, more inclusive future!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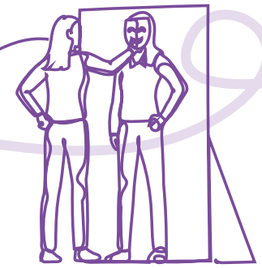

# Overcoming Imposter Syndrome & building confidence in Women Engineers

Imposter syndrome refers to the internalised belief that one's achievements are undeserved, attributing success to external factors rather than internal abilities. Despite external evidence of their competence, individuals with imposter syndrome remain convinced they are frauds and do not deserve the success they have achieved.

### How Imposter Syndrome Manifests in Women-Identifying Engineers

The field of engineering, being dominated by male representation, can often be a challenging environment for women. These challenges, coupled with societal norms and biases, can exacerbate feelings of fraudulence in women-identifying engineers. **Some common signs include:**

> **Chronic Self-doubt:** Questioning one's abilities despite a proven track record.
> **Attributing Success to Luck:** Believing that success is a result of luck or external factors rather than skill or competence.
> **Fear of Exposure:** A constant worry about being exposed as a "fraud" or "imposter."
> **Over-preparation:** An obsessive need to prepare or overwork, driven by fear of failure or exposure.
> **Dismissing Praise or Achievement:** Brushing off accomplishments and attributing them to external reasons, such as saying, "*I just got lucky.*"

### Strategies to Overcome Imposter Syndrome in Women-Identifying Engineers

> **Open Dialogue:** Encouraging open conversations about imposter feelings can help in normalising and addressing these concerns. By increasing self-awareness, more engineers suffering the imposter syndrome would be able to face them and seek help earlier.
> **Mentoring and Peer Support:** Building relationships with mentors or peers can provide perspective and validation. By sharing experiences and discussing challenges, women engineers can realise they aren't alone in their feelings and help develop strategies to overcome these feelings together.
> **Recognizing and Documenting Achievements:** Maintaining a record of accomplishments can serve as tangible evidence against feelings of inadequacy. When self-doubt creeps in, revisiting these achievements can offer a confidence boost.
> **Challenge Negative Self-talk:** Identifying and challenging negative self-beliefs can help in transforming them. When faced with thoughts like "*I'm not good enough,*" reframing them to "*I'm learning and growing*" can make a difference. Imagine how you would talk to a friend with similar issues as you when talking to yourself, many are too harsh to themselves and might worsen the imposter syndrome.
> **Seek Professional Guidance:** Sometimes, professional help, like counselling or therapy, can be instrumental in addressing deep-seated feelings of inadequacy. They can provide a professional view point, allowing engineers to step out and see how imposter syndrome was developed in themselves, helping them to slowly counter the problem by addressing the roots.
> **Education and Workshops:** Participating in workshops designed to tackle imposter syndrome can provide tools and strategies to cope. Being educated about imposter syndrome can help in quickly recognising and being prepared to deal with it calmly and effectively.

While imposter syndrome is a challenge faced by many, its effects on women in engineering are particularly pronounced due to existing gender disparities in the field. However, with awareness, support, and proactive strategies, it's possible to counteract its impact and empower women-identifying engineers to recognize and embrace their true worth.


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# AI vs Engineers?

With the recent popularity of the online chat bot known as ChatGPT, which is no doubt very intelligent, helpful and a bit intimidating, a question that has likely piqued your mind is: is Artificial Intelligence (AI) a friend or foe to us as engineers? In what ways is this technology already infiltrating the engineering sector? Will it be harder to find a graduate job thanks to ChatGPT? We've got lots of questions, let's try to find some answers!

### What is AI/ChatGPT?

AI is defined as a machine's ability to think, learn, and reason like a human's brain in response to a given problem or environment [1]. Created by AI research company, Open AI, the chatbot ChatGPT has been active since late 2022 [2]. Within 5 days of its launch, it racked up 1 million users [3]. Here's ChatGPT to introduce themselves: "I work by processing and generating text based on the input I receive. My training involved learning from a diverse range of internet text, books, articles and other written content to develop an understanding of language patterns, context and semantics." [4] After exchanging a few conversations with the chatbot yourself, you may wonder if it has infinite knowledge, seeing as it's capable of answering almost any question or prompt with a tone of certainty. However, it does have its limitations: its data is limited to pre-2021 and it can also misinterpret the given input, possibly presenting misleading information by consequence[1]. At this stage, ChatGPT still has some way to go until it is completely all-knowing, but its current capabilities deserve the hype!

### Is AI Among Us?

How has AI made its way into the engineering industry? ChatGPT can be used in a number of ways by engineers. Here's a few examples:

- **Software** → assist with coding and debugging
- **Electrical** → explain complex theories and suggest solutions
- **Chemical** → automate process optimisation to limit inefficiencies
- **Materials** → detail material properties to aid product development [5]

When we asked Powercor how they see ChatGPT being used in their company, they see it as an opportunity to improve stakeholder outcomes and effectiveness; they also see it as a tool to expedite policy/document drafting, enhancing their employees' journeys and onboarding experience.

Going beyond ChatGPT, in manufacturing, AI has allowed robots to evaluate data from production lines and mitigate equipment breakdowns. In transportation, engineers developing autonomous vehicles are feeding sensor readings to AI integrated in the vehicles to teach it to recognise road hazards, improving safety. AI is also in our skies, used in aerospace engineering to analyse data from wind tunnel and flight tests to refine the performance of aircrafts, leading to reduced fuel consumption [6].

Overall, the way AI uses algorithms to draw out patterns in data, also known as machine learning, is a powerful process being employed in different fields of engineering and aiding in cross-discipline projects by effectively managing data and relaying insights between engineers [7].

### Is AI a threat or a tool for engineers?

With so many capabilities and uses across all disciplines, will AI automate the role of engineers? According to a study being conducted by Stanford University, it is too early to worry about AI causing widespread disruption to labour markets. To support this claim, they highlight that pre-pandemic, employment as a fraction of the US population reached a 20 year high [8]. Applying the same argument to the Australian labour market, and regarding Figure 1, if we turn a blind eye to the dip mid-pandemic, there is an upward trend in the employment-to-population ratio. If AI were such a threat, this trend would not exist [9]. Consolidating this is a report by the University of Oxford, evaluating that science and engineering professions have a low susceptibility of computerisation compared to other jobs due to the high degree of creative and social intelligence they require [10]. However, as optimistic as we try to be, the threat of being replaced is not trivial. The same Oxford paper suggests that it is still possible


*Source: Australian Bureau of Statistics, Labour Force, Australia July 2023*

Figure 1 – **Employment-to-population ratio**
Upward trend in employment-to-population ratio suggests that AI is not disrupting the Australian labour market.

for computers to fully substitute workers in these science and engineering fields in the future. The 10 year old report even suggests that its very creators, software engineers, could be made redundant as machine learning with extensive code databases, may allow algorithms to learn to write programs that satisfy given specifications [10]. In retrospect, this was quite an accurate prediction seeing as ChatGPT has some coding capabilities.

On a lighter note, throughout the 4 industrial revolutions, from coal, to gas, to electronics, to AI, the engineering workforce has evolved with the times - in each new era there has always been an emergence of fresh jobs. For example, 1/3 of jobs in the USA that exist today, did not exist 30 years ago [11]. The same could be true for this age of AI; although jobs may be lost, new jobs will also be created. This will be an undoubtedly gradual process, beginning with AI replacing some engineering tasks rather than entire jobs [12]. Alleviating engineers of some work will allow them to spend more time on more creative work with which AI cannot assist. Furthermore, advances in AI and technology will create a need for engineers to research, create and test AI systems, giving rise to more job opportunities.

### So who wins?

Engineers or AI? From what we have observed, we cannot say that AI will never replace engineers, however, it is unlikely to happen in the blink of an eye. For now, the crown can be shared between the two parties. Engineers and AI complement each other across the whole industry; with engineers generating creative solutions, and AI supplying the tools to analyse, test or further develop these ideas. There is a sea of problems to solve together and a mountain of opportunities on the horizon.


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# Choose your story! Industry vs Academia in Engineering

*“I just want to graduate and get a well-paid job!”*
*“I want to dive deeper into my field and leave a legacy instead of working 9 to 5!”*
*“I don’t think I’m ready for the industry, but I am unsure about pursuing higher studies too…”*

Have you overheard these conversations or even had them in your mind during your years at university? Or are you a first-year with no one telling you about either route? Whether you've already made up your mind or you find yourself still lost and hesitant, rest assured that we're here to assist you in going through the parts that are significant career decisions. There is no right answer, but we hope to help you find the one that suits you best!

## 1. Passion and Impact

If you are someone drawn to practical applications of your knowledge and skills in solving real-world problems immediately, making a career in industry might be an appealing option. Industry professionals can see their work come to life in products and services that directly influence society.

On the other hand, those who have a deep curiosity and a desire to contribute to the advancement of knowledge may find academic research more alluring. While the impact may not be immediate, academic research has the potential to create a lasting legacy.

## 2. Nature of Work & Skill Sets

Industry roles often involve designing, developing, and implementing solutions that address specific challenges faced by companies. This may include product development, process optimisation, and project management. Thus, industry positions often require strong problem-solving skills, teamwork, project management, and practical application of engineering principles.

In contrast, academic research is characterised by a focus on discovery and innovation with a longer timeline. Researchers delve into unexplored territories, seeking to expand the boundaries of human understanding. This pathway involves rigorous experimentation, data analysis, and publication of findings in scientific journals. This means that academic research demands critical thinking, analytical skills, attention to detail, and the ability to design and execute complex experiments.

The fast-paced and results-oriented environment of industry can be exhilarating for those who thrive on tangible outcomes. While the pursuit of knowledge and the potential to make groundbreaking contributions can be highly rewarding for individuals who are driven by intellectual curiosity.

## 3. Collaborative vs Independent Work

Industry roles often involve collaboration within multidisciplinary teams, fostering communication and the exchange of ideas. This collaborative environment can lead to well-rounded solutions but may also require compromise and coordination. For example, you might need to get project approval from either clients, project managers or engineers in other disciplines while also being managed by supervisors depending on the organisation.

Academic research, while not devoid of collaboration, allows for more independent and self-directed work. Researchers have the freedom to choose their research topics and delve deeply into their areas of interest without the constraints of market demands. You are able to work with experts in your area of interest and meet even more of them while travelling to conferences.

## 4. Work-Life Balance

Industry roles often come with a structured work environment, regular working hours, and defined roles. This can provide a sense of stability and predictability. However, some industries may demand overtime during project crunch times, affecting work-life balance.

In contrast, academic research offers greater flexibility in terms of work hours and location. Researchers have more autonomy over their schedules, allowing them to balance work with personal pursuits. However, the freedom and flexibility can also lead to long hours in the lab or library, blurring the line between work and personal time.

## 5. Financial Considerations

Industry positions typically offer competitive salaries, benefits, and potential for career advancement. Graduates entering the workforce may find immediate financial stability, which is appealing, especially if they have student loans to repay. In addition to that, you will have time to do freelance work for extra money.

Academic research, while intellectually rewarding, may offer lower initial compensation, particularly at the graduate and postdoctoral levels. Academic research, especially in tenure-track positions, often necessitates a Ph.D., which involves further education fees. However, tenured professors and established researchers can earn competitive salaries over time, especially if they secure research grants and collaborations. This leads to another topic of academics about writing grant proposals and competition for funding.

### TL;DR? Quick questions to ask yourself!

1. *“Do you want to make a product with current technologies or be the one that develops new technologies?”*
2. *“Do you enjoy problem solving for industrial projects under tighter deadlines or experimenting and publishing your findings for future long-term applications?*
3. *“Do you prefer collaborating with people from various backgrounds or people with the same areas of interest?”*
4. *“Do you prefer getting regular days off under a structured schedule or enjoy diving into theories and experiments anytime in your own managed schedule?”*
5. *“Do you prioritise intellectual freedom even if it means foregoing additional education or potential salary growth as you advance in your career?"*

## Conclusion

There is no one-size-fits-all answer, as individual preferences, strengths, and circumstances play a significant role in guiding this choice. Whichever path is chosen, the world of engineering offers a myriad of opportunities for growth, learning, and meaningful contributions. Your career trajectories are not set in stone, engineers in industry can transition to academic roles later utilising their practical experience. Whereas researchers may transition to applied research roles or engineering positions with industry partners. While being a current engineering student, feel free to check out opportunities in Monash research programs or employment platforms for industrial internships to get a taste of both worlds!

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# Pioneering Women Engineers:

Innovation knows no bounds, and women engineers have proved time and again that their genius transcends any limitations. With a blend of visionary technology and a dedication to sustainable solutions, these women have etched their names in history. This article is a tribute to their ingenuity, a spotlight on their transformative innovations that shape industries and redefine our world.

## Grace Hopper

**Pioneering Compiler Technology:**
Grace Hopper developed the first compiler, which translated human-readable code into machine code, leading to the creation of high-level programming languages like COBOL. Her innovation revolutionised software development and paved the way for modern programming languages.

## Katharine Blodgett

**Langmuir-Blodgett Film:**
Katharine Blodgett's work on Langmuir-Blodgett films led to advancements in thin film coatings and anti-reflective lenses. Her innovation improved optics in various industries, including eyeglasses, camera lenses, deicing for aircraft materials, poison gas absorbents. (Whelan et al.)

## Mary Sherman Morgan

**Aerospace Propellant:**
In the arena of aerospace engineering, Mary Sherman Morgan's brilliance radiates. Her pioneering rocket propellant, Hydyne, provided the thrust for the initial U.S. space missions, expanding the horizons of human exploration. Hydyne was used in projects including the historic VVanguard TV3 mission. Mary Sherman Morgan's lasting legacy serves as a tribute to the relentless spirit of discovery.

## Edith Clarke

**Graphical Calculator:**
Pioneering electrical engineer Edith Clarke invented a graphical calculator that greatly simplified the calculations necessary to determine the electrical characteristics of long electrical transmission lines. (“NIHF Inductee Edith Clarke Invented the Graphical Calculator”)



Pioneering Women Engineers: Igniting Innovation Across Fields

# Igniting Innovation Across Fields

## Frances Arnold

**Directed Evolution of Enzymes:**
In the realm of biotechnology, Frances Arnold's innovation is a symphony of life. Her pioneering work in directed enzyme evolution has orchestrated the creation of bio-catalysts that breathe life into fields as diverse as pharmaceuticals and renewable energy including drug development, biofuel production and bioremediation.

## Radia Perlman

**Network Connectivity:**
Spanning Tree Protocol is the backbone of ethernet technology we enjoy and rely upon today. The tree links became standard protocol and enabled massive networks which solved challenging information routing problems.

## Helen Greiner

**iRobot:**
Helen Greiner's co-founding of iRobot led to innovations like the Roomba vacuum cleaner and the PackBot military robot. Her contributions revolutionised the fields of robotics and automation, shaping how we interact with technology.

## Lynn Conway

**Microelectronics chip design:**
Lynn Conway is a famed pioneer of microelectronics chip design. Her innovations during the 1970's at the Xerox Palo Alto Research Center (PARC) have impacted chip design worldwide. Many high-tech companies and computing methods have foundations in her work.

> These women engineers are not just innovators; they are architects of possibility, sculptors of the future. Their innovations are not just products; they are stepping stones that elevate us to new horizons. As we honour their contributions, we acknowledge that the symphony of innovation they've orchestrated transcends generations and genders, echoing through time as a beacon of progress.


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# Fostering Diversity & Empowerment: A Dive into Outreach

Although the engineering community has grown and become more diverse over the years, it's suffice to say that it is still a male-dominated industry. To help bridge this gender gap, WEM has established an Outreach team that focuses on inspiring young women to pursue future careers in engineering and other STEM disciplines. As a member of this wonderful team, I have had the privilege of participating in three events which seeked to inform and empower female-identifying high school students. Each of these events provided a platform for us to share our experiences, advice, and address any concerns or misconceptions about studying STEM at university.

## Event 1: GHD Engineering

The collaboration with GHD presented an excellent opportunity to engage with students from a local high school in Geelong. At this event, we delivered a presentation on our individual journeys as students in engineering. Through sharing our experiences and motivations for choosing our current fields of study, we hoped to instil confidence and highlight the diverse range of pathways that led us to where we are today. Common concerns brought up during the insightful Q&A session encompassed the male-dominated nature of engineering courses and potential mistreatment. We addressed these concerns by highlighting the range of supportive networks that exist at universities, providing students with the confidence that there are always resources and individuals ready to provide assistance.

## Event 2: Nova Rover X MEG Monash Engineering Girls

The Nova Rover X MEG event hosted at Monash University allowed us to deliver a presentation similar to the one delivered at GHD, this time with a different range of perspectives.

Other members of WEM joined us and were able to share their unique insights into their pathways into STEM and the experience they have studying their particular engineering disciplines. In addition to the presentation, we incorporated an interactive group activity where students created claw machine claws out of cardboard. This hands-on experience symbolised the practical and creative side of engineering, simulating the collaboration involved and cultivating interest in the field.



## Event 3: Mac.Robertson Girls' High School ICT Conference

Our work with The Mac.Robertson Girls' High School for the ICT Conference marked another milestone for the outreach team. Our participation in the expo helped raise awareness about the dynamic opportunities available in the engineering and IT industries. At our stall, we distributed handbooks containing comprehensive information about engineering, IT, and other degrees offered at Monash University. As representatives of the faculty, we responded to student inquiries and provided insight into the different engineering specialisations as well as our own experiences with the courses.

Students were particularly interested in the content and structure of the engineering courses and our advice helped to inform their opinions on pursuing engineering and other STEM disciplines.

## Conclusion

My experiences as part of the Outreach team at WEM have been inspiring, both for the high school students we engaged with and myself. Through our presentations, hands-on activities, and address of general inquiries, we have strived to encourage young minds and provide an appreciation of engineering and STEM. These outreach efforts aimed to empower future female engineers and contribute to a more inclusive engineering community.

As we continue these efforts, we hope to see a future where diversity thrives.

# An international perspective on Women in Engineering

Diversity is crucial to innovation and creativity in engineering fields, where different perspectives and fresh viewpoints are invaluable. Nowhere is this more evident than in the area of gender diversity.

Currently, women make up an estimated 16.5% of the global engineering workforce [1]. Globally, women make up 28% of the engineering graduates [1]. However, as we delve into international perspectives of women in engineering, we uncover a wide range of different situations and viewpoints across different cultures. While engineering representation for women is generally low across the globe, there are many countries with higher representation from which we can learn. These anomalies challenge us to delve deeper, uncovering the intersections of culture, economic status, and access to education that shape career trajectories.

## The global lessons– Western viewpoint

While countries have varying degrees of women representations in engineering, western societies like Australia, the UK and the US have shown similar statistics. Currently, 23.2 per cent of engineering graduates in Australia are women [2],while the percentage in the workforce may be as low as 13% [3]. UNESCO found similar numbers in the UK and USA, with women comprising 23.5 per cent and 20.4 per cent of the engineering cohort respectively. Similarly, women constitute 14.5% of the UK engineering workforce [4], and 15.9% of the ones in the US [5]. The similar figures in Australia, the US and the UK could be due to similarities in culture, such as acceptance of men in technical roles and women in caring roles, including teaching and nursing, as well as similarities in STEMM teaching quality at a higher education level. However, these figures are lagging behind many countries across the globe, with some of them being of lower socioeconomic status and gender equality indexes. What can we learn from these countries?

## The global lessons– Socio economic status

Counterintuitively, many of the highest women-representation in engineering statistics come from developing countries with emerging socio economic developments. For example, Lithuania, Latvia, Oman and Malaysia all have above 50% of women in engineering [6]. The highest proportion of female engineering graduates is Benin at 54.6 percent, followed by Brunei Darussalam at 52.3 percent [2]. This inclination might stem from the lucrative nature of engineering degrees, appealing particularly to those from lower socioeconomic backgrounds for financial reasons. A developing country with lower socioeconomic status may have a more utilitarian culture that puts less emphasis on passion for a career and more emphasis on financial stability.

In India, where women make up 48% of the engineering sector, one female engineer expressed that *"A STEMM career is viewed as a way to guarantee financial stability and upward mobility on the socioeconomic ladder which incentivises everyone, including women, to get into a STEMM field"*. [2] The significant portion of women present in the engineering workforce in turn fosters a culture where engineering is not seen as male dominated, and women get represented in higher management too. When looking at the broader STEMM field, Georgia, Cambodia and the Dominican Republic all have more than 50 percent of roles filled by women, being top of the globe [7]. Some have speculated that this could also be due to them quickly developing new technologies in emerging fields where there are less gendered stereotypes against women [7].



## The global lessons– Government initiatives

Many of the high percentages of women in engineering statistics are results from strenuous efforts from government or other organisations that promote engineering for girls and women. For example, Bulgaria has the highest proportion of female computing specialists in Europe with 28% women, followed closely by Lithuania and Romania [8]. In Bulgaria, the government put huge emphasis on making the country a global technology leader in the 70s and 80s, attractive for both men and women, resulting in gender equality at the workplace [8]. In Oman, the government has made considerable efforts to promote the subject among women [8]. This is paired with the efforts of organisations such as Society of Women Engineers (SWE), dedicated to increasing women's participation throughout multiple engineering fields through offering educational opportunities and scholarships [9]. There are a range of similar organisations across the globe, for example, notable organisations such as Women in Technology International (WITI) and TechWomen in the US are providing mentorship, networking, and advocacy platforms for women engineers to thrive [10].

## Global lessons– Defying gender stereotypes

Interestingly, many countries with higher women in engineering participation rate are commonly seen as less gender-equal. Some of these countries face cultural shifts amongst women, for example, the eagerness to go into engineering is part of an awakening among Middle Eastern women, to defy that engineering is a man's job [11]. It is worth pointing out that a controversial study suggested that gender equality may in fact be detrimental to increasing the number of women in STEM [11]. It is speculated that gender equality leads to more welfare for women and therefore more freedom to choose non stem degrees, and follow one's passion [12]. One might question the effect of freedom to pursue one's dream in the west. For young girls in western countries who hear the idea of following your passion, they may in fact be more susceptible to gender stereotypes due to their identity becoming tied to people in careers who look like them, in the pursuit of individualism and free choice [12]. A similar idea is raised for the freedom to choose high school classes, where many girls who are otherwise good at STEM drop out of maths or science due to gendered influences [11]. A lesson we might learn from this is that it is crucial to increase role models working in STEM and lessen gendered stereotypes for young girls.

## Global lessons– Historical and cultural reasons

Many countries have historical reasons that shape their current women in engineering situations. In Japan, the acknowledgment of women as integral members of the workforce didn't occur until 1986, a reflection of the considerable influence of a community-specific patriarchal system and its unyielding nature [13]. In contrast, Malaysia, a country with a progressive history of gender equality since the sixteenth and seventeenth centuries, resulted in women being socially better positioned compared to other parts of Asia [13]. Being influenced by historical trends, many countries are slow in cultural shifts, which may put them behind on encouraging women to pursue STEM degrees.

In conclusion, there are many things we can learn from the global engineering workforce. In general, it seems the participation of women in engineering is heavily shaped by cultural factors and gender stereotypes. However, the outlook is promising as university enrollments continue to rise globally, and global women engineering representation has increased from 10 to 16 percent since 2010 [1].

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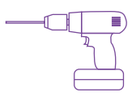
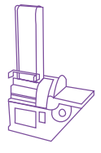
In Semester 2, WEM held the transformative Powertools Workshop event where attendees were able to craft their own functioning wooden laptop stand while mastering their skills with an array of powertools. This dynamic event also smashed stereotypes, sparked creativity and nurtured a sense of empowerment amongst young engineering students.

The workshop began with a comprehensive safety demonstration and spotlighted the following key power tools:



> **Drill:** A versatile tool used to create holes of various sizes, along with driving screws and fasteners.

> **Jigsaw:** Used for precision cutting, particularly for intricate shapes and curves.



> **Linisher:** A tool that sands and smooths surfaces.

Upon completion of the workshop, participants had gained expertise in the use of power tools in everyday life such as for woodworking, gardening, home renovation and more.

In a realm where power tools can appear daunting, especially in a male-dominated sphere, the WEM Powertools Workshop stood as a testament to breaking down those barriers.

The workshop's primary goal was to cultivate confidence among diverse groups in engineering, allowing them to navigate the use of power tools with skill and assurance, ultimately reflecting the boundless possibilities and potential that we hold within ourselves.

Jazlyn and Kayla reflect the essence of the workshop, showcasing journeys of personal growth.Their newfound confidence after just one session is a testament to the workshop's success in being a platform to challenge comfort zones and explore new possibilities.



Attendees not only left with a laptop stand but also a profound sense of empowerment and accomplishment. By equipping participants with the tools and guidance to master powertools, WEM boosted self-esteem, serving as a reminder that we all have the determination and capacity to shape our own engineering journeys.

**— JAZLYN:**

***"I initially thought that powertools were difficult to handle and something beyond me, but after completing the workshop, I felt much more confident"***

2nd year software engineering student

**— KAYLA:**

***"Making the laptop stand was a really fun experience for me. It was something I never imagined myself doing, using power tools and putting something together basically from scratch."***

1st year engineering student

# Interview TIPS & TRICKS

## The First Impression

You are being assessed as soon as you walk through to reception so it is important to be polite and courteous to reception staff. Companies often ask reception for feedback on candidate behaviour whilst they are waiting.

Make sure to arrive on time and your phone is silent to avoid disruptions during the assessment. It is also important to stay professional and wear appropriate attire. Generally, it is better to be overdressed than underdressed.

## Initial Research

With interviews, it is all about research. There is no excuse for not knowing information about a company that is publicly available. Make sure you understand the company's goals, values and mission. Reflect on knowledge gained and which values you connect with. This will also make it easier for you to tailor your answers to the company.

For PhD candidates, look into what the intended supervisor has worked on recently - look up some of their papers and have a quick read through. You should also think about some board topics and goals for your project.

## Preparation

Just the idea of job interviews can raise anyone's heart rate. In order to lessen the apprehension, preparation is key. There is nothing wrong in coming up with examples to mock interview questions, although make sure to avoid rote learning. Get a friend or mentor to do mock interviews with you. This will increase your confidence on the day and provide a back-up if your mind goes blank. You will also benefit from a more precise and clear explanation to persuade the company of your suitability.

You will have an opportunity to ask questions at the end, so prepare at least 2-3 thoughtful questions about the company's projects, technologies and future plans. Asking and preparing a few questions to recruiters demonstrates you are engaged and committed.

### Examples

- Do you offer continuing education and professional development opportunities?
- What can you tell me about your new products or plans for growth?
- Are there opportunities to rotate between different sub-teams?

## STAR

The STAR method **(Situation, Task, Action, Result)** is a great way to structure your response during an interview. **Example: What's a situation where you had to resolve conflict in the past?**

**S** **Situation:** During an engineering project class, I was working on a team project to design an elevator floor that was within budget and met the correct safety factors. Our team consisted of three other students.

**T** **Task:** Two of my group members had differing opinions on the best approach to take. One was advocating to use a lighter but more expensive material to meet the safety factors and the other wanted to use a cheaper but heavier material to stay within budget.

**A** **Action:** To address the conflict, I suggested we hold a team meeting to openly discuss both approaches and for the two team members to prepare 3D models on Solidworks to demonstrate the effects of each material when used. As the conversation progressed and both models were shown, we realised that neither of the approaches would satisfy both requirements. Instead, I proposed that we change the design to add reinforcement beams. We can use the cheaper material for the main structure then adding reinforcement beams out of the stronger material.

**R** **Result:** The team responded positively to the hybrid solution and we worked together to refine the design. This experience taught me the importance of effective communication and finding a common ground to resolve team conflicts to ensure all members are happy since it is a team project.



## Take Credit

Women tend to use *'we'* instead of *'I'* when talking about their past experiences. Although *'we'* is valuable to showcasing teamwork and fostering inclusivity, it is essential to strike a balance. Particularly in situations such as interviews where you want to put the focus on yourself and highlight your achievements and personal growth, using *'I'* underlines your agency and ownership.

## Relationships and Connections

Relationships and connections are very important. Get in touch with an employee through information sessions, introductions, university sponsor fairs or alumni outreach and ask for advice on what the company is looking for. You will be able to efficiently tailor your responses to the company as employees can offer highly specific edits such as buzz words. Furthermore, there is a high prospect the employee will put in a good word with recruiters if the conversation goes well.

## Interpersonal Skills

Interpersonal skills are highly valued by employers so don't just show recruiters your problem solving skills. The other candidates should not be considered as direct competition but rather an opportunity to demonstrate your ability to effectively work in a team, communicate with others and show leadership skills. Make sure to be supportive and assertive but not dominant. During the breaks, take up every moment to start a conversation with other candidates, staff members, and even assessors and recruiters.

## Concrete Details

Quantify and illustrate your accomplishments with examples rather than just using words to list them out. This provides evidence to underscore the significance of your accomplishments which few people do so you will really stand out. Similarly, a good way to convey the magnificence of an award is to reveal the competition. This demonstrates how competitive your spot was and will magnify the impressiveness.

Recruiters look for well-rounded individuals who have lots of experiences to complement academic excellence. Make sure to get involved in extracurricular activities, take on internships or have a part-time job. This will also allow you to back up your list of skills and qualities with specific examples.

### Example:

- **Weak:** Managed a budget to plan large-scale events for students
- **Strong:** Managed $12,000 budget to plan large-scale events for 2,500 students

### Example:

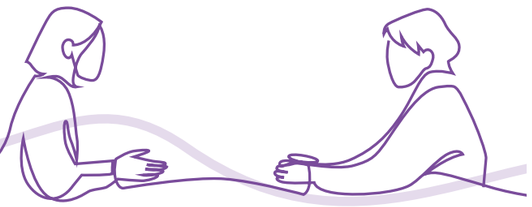
- **Weak:** Won Granny Smith University's Innovation Competition
- **Strong:** Won $1,000 for Granny Smith University's Innovation Competition (80+ entrepreneurs competed)

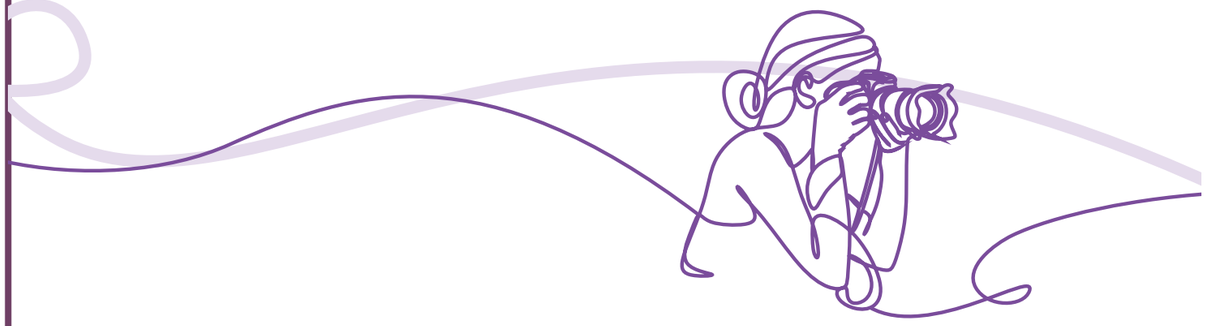
## Keen and Interested

Make sure to actually convey that you want to work for the company by being excited and energetic during the interview. Companies not only seek competent engineers but also individuals who are genuinely passionate about their work and the organisation's mission. Maintain eye contact with your interviews and don't be afraid to let your smile reflect your excitement. Express your eagerness to learn from the company's experts, collaborate on challenging projects and contribute to their innovative advancements. By being both well-prepared and visibly excited, you're not only showing that you're a skilled engineer, but also that you would be a valuable asset to their company.

## Sidestepping Questions

Recruiters may sometimes inquire about information that is not relevant to the role or even ask illegal questions such as about religion, age or political ideologies. Regardless of whether a question is illegal or not, when you're eager for a role, it is hard to refuse an answer. If an interviewer steps out of line and asks an unlawful question, politely decline to answer the question on the basis that the answer is not relevant to your ability to perform the role. This response will ideally cause the interviewer to realise their misstep and withdraw the question. It is your right to not answer questions on the basis of discrimination.





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*President*

Imogene Jones
*Vice President*

Khanh Le
*Treasurer*

Kelly Li
*Secretary*

Claire Zhang
*Assistant Industry Director*

Shamila Saputantrie
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Caryn Loh
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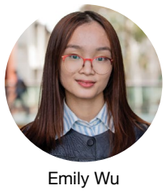


Emily Wu
*Event Officer*

Ashali Haputhanthri
*Marketing Director*

Nethmi Pallimulla
*Marketing Officer*

Hasee Meegahawattage
*Marketing Officer*

Vicky Huang
*Outreach Officer*

Kayla Larbi
*1st Year Representative*

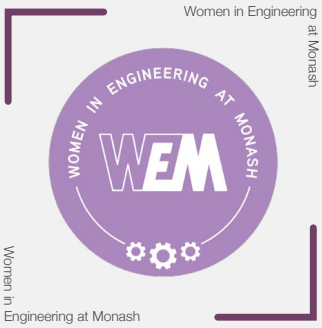
Naree Khuon
*1st Year Representative*

Jazlyn Thanyasmith
*2nd Year Representative*

## Organiser/Design

Raksha RVS
*Industry Director / Main Organiser*

Frances Eddy
*Graphic Design*

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