



Women in STEM - Decadal Plan Champion Response 2023



TMOS

ARC CENTRE OF EXCELLENCE FOR
TRANSFORMATIVE META-OPTICAL SYSTEMS

Our Vision

The Australian Research Council Centre of Excellence for Transformative Meta-Optical Systems (TMOS), the Centre, will develop the next generation of miniaturised optical systems with functionalities beyond what is conceivable today. We are a trans-disciplinary team of world-leaders in science, technology, and engineering delivering scientific innovations in optical systems.

By harnessing the disruptive concept of meta-optics, we will overcome complex challenges in light generation, manipulation and detection at the nanoscale. Our research outcomes will underpin future technologies, including real-time holographic displays, artificial vision for autonomous systems to see the invisible, wearable medical devices and ultra-fast light-based Wi-Fi, meeting the evolving demands of Industry 4.0.

We work together to make a team culture that is inclusive, values diversity, strives for equity, and accessibility (you get the IDEA!) so that everyone can participate.

Decadal Plan 2023 Content.

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Introduction

The Centre was established in January 2021 and will run for seven years, training a cohort of Higher Degree Research students and Postdoctoral Research Fellows during its lifetime. These researchers will be working on fundamental and applied research working collaboratively between the Centre's various nodes and with our external academic and industry partners to deliver real-world solutions to current problems.

TMOS is building a meta-optics workforce that contributes to the dissemination of meta-optics knowledge and skills throughout a range of industries. We are a key player in the next technology revolution.

As researchers, we know that diversity improves ideas and innovation and leads to better outcomes and productivity. Diversity and fostering a culture of inclusiveness will be a key contributor to the scientific excellence of the Centre.

All 5 Australian universities affiliated to the Centre have a bronze accreditation in the Athena Swan or Science in Australia Gender Equity (SAGE) program.

We believe that 'together we're meta!' Our Centre has a set of values, which highlight what is important to us as a team. Our first value is Collaboration! Collaboration is about working together to make a team culture that is inclusive, values diversity, strives for equity, and accessibility (you get the IDEA!) so that everyone can participate.

Our second value is Education. We embrace learning and failing forward, gaining insight from each iteration of our experiments, processes and beyond.

Our third value is Discovery. We do research at the highest international level as an interdisciplinary team. We make the unknown knowable through the pursuit of fundamental

science.

Next, we have Innovation. We have a passion for technology innovation due to the positive impact it has on the world. Our science has a purpose.

Finally, Engagement is important to us. Internally, we connect with each other, celebrating our wins and creating a fun and safe workplace. Externally, we engage with partners and the public to share the joy of science, and to translate our research into novel technologies.

IDEA Values

Respect: We respect and value the diversity of our staff and students – who are Aboriginal and Torres Strait Islander, culturally and linguistically diverse, who are of diverse gender identities, sexes and sexualities, who have a disability, ongoing medical or mental health condition and who are socially or economically disadvantaged.

Safety: We seek to provide a culturally and psychologically safe environment where our Indigenous communities and students, and staff of all backgrounds are respected and included.

Innovation: We measure, assess and strive to improve our efforts to provide a diverse and inclusive environment for our staff and students and communicate these efforts throughout the community.

Sustainability: We capture and embrace our whole community's diversity while maintaining the integrity of the international relationships we hold.

Our Pledge to Inclusion, Diversity, Equity and Access (IDEA)

INCLUSION

Organisationally, inclusion requires the identification and removal of barriers (e.g., physical, psychological, procedural, visible, invisible, intentional, unintentional) that inhibit members' participation and contribution, and increasing transparency in decision-making processes at all levels.

Inclusion requires every member of the community to demonstrate the values and principles of fairness, justice, equity, and respect in learning, teaching, research, service, and employment, by being open to different voices and perspectives, developing an understanding of different cultures, experiences, and communities, and making a conscious effort to be welcoming, helpful and respectful to everyone.

DIVERSITY

'We value the differences individuals bring to the work environment.' These may be individual – such as personality, traits, identity, learning styles and life experiences; physical ability or attributes cultural and linguistic background, ethnicity, class, age, gender and sexual identity, disability, family responsibilities; religious or ethical values system, national origin, and political beliefs.

To have a truly diverse university community requires an inherent commitment, demonstrated through actions, that recognises and values these differences.

EQUITY

We give fair and just treatment of all potential and existing members of the community' through the creation of opportunities to address historic and current disadvantage for underrepresented populations. These opportunities will lead to equitable outcomes in the context of learning, teaching, research, service, and employment, including closing representation and participation gaps within our university community.

Equity requires an intentional commitment to strategic priorities, resources and respect, and ongoing action and assessment of progress towards achieving specified goals.

Our Pledge to Inclusion, Diversity, Equity and Access (IDEA)

ACCESS

‘We are accessible’.

The commitment to foster attitudes, behaviours, and procedures to facilitate access that promotes equity and diversity, fosters inclusion, and allows people to maximise their contribution to the Centre and communities that the Centre serves.

Based on these principles, the Centre:

Is responsible for creating and promoting inclusive research and working environments, which are open to differences, inviting diversity, intolerant of discrimination.

Recognises human diversity as an asset and acknowledges its potential as a source of growth and creativity.

Commits to equitable practise as crucial factors for participation and opportunity.

Enables advocacy to form inclusive practices and processes across all partners and participating organisations.



Opportunity One: Leadership

Commitment

When establishing TMOS, the principles of Inclusion, Diversity, Equity, and Access (IDEA) were infused into all facets of the Centre. Upon its inception, a comprehensive IDEA Framework was devised, complemented by the establishment of an IDEA Committee. This committee was tasked with formulating policies and procedures aimed at fostering a workplace that champions diversity and inclusivity. Remarkably, we are also the only Australian Research Council Centre of Excellence to employ a dedicated IDEA Officer – an industry professional in equity, diversity, social justice and inclusion.

The Centre Executive unanimously committed to a pivotal goal: achieving a 40% representation of women by 2026 from an industry baseline of 17%. Encouragingly, the Centre has made significant strides, with 33% of Centre personnel being women from 2021. This head start can be attributed to an initial targeted recruitment drive specifically focused on women in 2021.

In the subsequent year, 2022, the Centre launched an expansive recruitment campaign aimed at attracting a more varied spectrum of talents into our Centre, thereby enhancing its gender diversity.

An integral facet of our approach involves all Centre Executives pledging to undergo continuous professional development in the realm of IDEA, commencing with rigorous unconscious bias training. This commitment to growth and awareness extends annually, with each year bringing a distinct focal point. For 2023, inclusive leadership training was the focus, which was also extended to our next generation leaders too - Research

program managers. Such training is particularly crucial within the academic sphere, where comprehensive leadership development remains limited as one ascends the academic hierarchy.

The executive's resolute dedication to gender equity within the Centre has been visibly demonstrated through their active endorsement of special measures (women only/women preferred) recruitment drive and the pioneering Women First update to the Centre's Recruitment Policy and Procedure. These initiatives have yielded significant advancements in gender parity, underscoring the pivotal role leadership plays in this journey.

The IDEA Committee, instrumental in shaping the Centre's approach, has meticulously devised a strategic plan comprising 33 actionable points, designed to be realised over the Centre's lifespan.

IDEA Implementation Plan

The implementation and strategic plan are slated for an update in 2023, in anticipation of the Centre's mid-term review. This forthcoming review is poised to provide us with a vital opportunity to align our strategy with the headway we've achieved thus far, as well as to pinpoint the areas that necessitate further effort.

A background photograph of three people in a room, overlaid with a semi-transparent blue filter. On the left, a person in a grey shirt is partially visible. In the center, a person with long hair and glasses wears a plaid shirt. On the right, a person with glasses and a face mask wears a dark top. They are gathered around a white table. A rainbow-colored circular object is on the table. The text 'Opportunity Two: Evaluation' is written in white over the image.

Opportunity Two: Evaluation

Culture Survey

The Centre recognises the pivotal role that evaluation plays in gauging the impact and reception of its initiatives. The inaugural year of TMOS focused on establishing foundational principles, and now, it is poised to assess the effectiveness of the work. To comprehend the scope of the IDEA efforts to date, the Centre embarked on an inaugural culture survey. We asked a total of 33 questions covering areas such as, TMOS is a diverse and inclusive organisation, I can be my authentic with my TMOS colleagues, Senior staff role model good behaviours. The survey is instrumental in establishing a baseline, identifying areas for enhancement, and gauging progress in gender equity and IDEA implementation. Moving forward, this culture survey will be conducted annually, enabling the Centre to continually monitor our impact.

The initial outcomes of our first culture survey were predominantly positive, serving as an encouraging point of departure. Nevertheless, it also spotlighted areas where improvements can be made. With a 70% participation rate, the survey offers a substantial insight into the sentiments of individuals within our organisation. However, in the forthcoming years, we aspire to achieve an even higher participation rate to ensure a more comprehensive perspective.

As depicted by the results, a majority of our members express contentment with the workplace culture so far. Nonetheless, we emphasise the significance of not dismissing negative feedback—an oversight that many organisations make. Throughout 2023, the Centre's commitment to cultivating an inclusive and equitable workplace will persist.

The IDEA committee undertakes the ongoing task of monitoring the gender balance within our Centre, extending support to any participating university that might require it. Our dedication to advancing gender equity across all facets of the Centre is resolute. In 2022, women constituted 33.33% of our Centre, and as previously mentioned, we are diligently working toward achieving a minimum

of 40% representation by 2026. To this end, we are implementing measures outlined in Opportunity Three: Workplace Culture. Another crucial metric for evaluating our commitment to gender equity lies in tracking participation and completion rates of our IDEA training programs. In 2022, we achieved an impressive 100% completion rate among members engaging in our online training program. This result was achieved by targeter reminders to the Centre's members as well promoting its importance throughout the Centre. This serves as a promising indicator of the dedication and backing our members exhibit towards gender equity.

| TMOS is a diverse and inclusive organisation. | |
|---|----|
| · Strongly Agree | 42 |
| · Agree | 28 |
| · Neutral | 3 |
| · Strongly Disagree | 1 |
| Grand Total | 74 |
| TMOS celebrates diversity of ideas and people. | |
| · Strongly Agree | 38 |
| · Agree | 27 |
| · Neutral | 6 |
| · Disagree | 2 |
| · Not Applicable | 1 |
| Grand Total | 74 |
| TMOS represents people like me in its social media, blog posts, and other outreach? | |
| · Strongly Agree | 38 |
| · Agree | 23 |
| · Not Applicable | 7 |
| · Neutral | 5 |
| · Disagree | 1 |
| Grand Total | 74 |

A woman with long dark hair, wearing glasses and a black face mask, is working in a laboratory. She is wearing a white lab coat with a floral pattern. The background shows various laboratory equipment, including a computer monitor and a microscope. The entire image is overlaid with a blue tint.

Opportunity Three: Workplace Culture

2020 Women Only Recruitment Round

The Centre took a significant step forward by conducting a women-only recruitment round, yielding remarkable success. A pivotal aspect of our commitment to fostering a balanced workforce revolves around addressing underrepresentation in our Centre. A strategic approach in this regard involved implementing women-only recruitment rounds across our partner universities.



In 2020, the Centre Executive committed to establishing a foundation of gender representation in the research workforce. The Centre simultaneously advertised all initial postdoctoral fellow positions, with 13 out of 15 roles exclusively seeking applications from women candidates. The outcome was exceptional, generating a pool of 330 applications during this specialised recruitment phase. Consequently, the Centre recruited six accomplished women to start in 2021, and facilitated the direct appointment of two women in 2020. As a result of these concerted efforts, the Centre has achieved a commendable representation of 33% women in the postdoctoral fellows' cohort – a statistic that stands twice as high as the national average in the fields of physics and engineering.

2023 Women First Recruitment

In 2023, the Centre further enhanced its gender equity efforts, by amending its Recruitment Policy and Procedure to include women first in advertising postdoctoral roles. The IDEA Committee formulated and endorsed this strategy, which will encompass all postdoctoral positions within the Centre. This approach involves initiating international advertising of all postdoctoral roles as women-only or women preferred (Western Australia). In instances where suitable candidates are not identified through the women first approach, the position may subsequently be advertised more broadly. This policy serves as an innovative alternative to the centre-wide women-only round that was employed in 2020 by allowing greater flexibility on the timing of recruitment to suit local area requirements.

The introduction of this policy stems from our commitment to sustain the momentum of our efforts. By establishing a continuous recruitment framework with a focus on the employment of women, we are ensuring that our gender equity endeavours remain steadfast throughout the lifespan of the Centre. A distinct advantage of this approach is that it empowers our individual hiring managers with greater autonomy over their hiring processes. Rather than awaiting a centre-wide recruitment cycle, managers are responsible for making timely hires as needs arise, further reducing perceived and actual barriers to affirmative action.

Participation and Inclusion Policy

In 2022 the Centre established a Participation and Inclusion Policy, this was endorsed by the Centre Executive. The purpose of this policy is to provide expectations and guidance for Centre leadership and Centre members for reducing the barriers to workplace participation and inclusion and build community in alignment with the Centre IDEA Framework.

Objective

To create and maintain an inclusive workplace where all Centre members can participate to the fullest – as STEM is for everyone!

Scope

This Centre policy applies to all Centre members, activities, events, and places of work.

Where a conflict arises between this policy and University policy, the University policy has precedence.

This policy covers areas of business including: Planning, Meetings, Seminars, Events – Internal Conferences and Workshops, Events – External Conferences and Workshops, and Events – Local

The Participation and Inclusion Policy serves as an invaluable resource for all Centre members, offering essential guidance

for organising or participating in various events such as conferences, workshops, and meetings. This policy effectively delineates aspects within the realm of IDEA that might not directly impact individuals. Recognising that unconscious biases can inadvertently lead to the exclusion of specific demographics from these activities, the policy takes a proactive stance in addressing this issue. The policy also asks leaders to consider their role in calling in academic conference organisers to do better in ensuring diversity of speakers or to have own policies in place that support improvement in this important domain of academic life.

Through the formulation of this policy, the Centre has equipped our members with a decision-making tool that encapsulates the current leading practices in the realm of inclusion and participation. The implementation of this policy is poised to heighten the collective awareness of our members regarding the distinct needs and requisites of a diverse array of individuals. As a direct consequence, the Centre anticipates a more considerate and thoughtful approach when it comes to both organising and attending events, creating positive impact beyond the Centre.

By providing clear guidelines and fostering a greater consciousness of inclusion, the Centre actively working towards cultivating an environment where all members feel valued and accounted for in every facet of their involvement within the Centre.

IDEA Travel Scholarship Program

In 2023, the Centre initiated the IDEA Travel Scholarship Program, a significant step in addressing the gender pay gap and promoting inclusivity. This Scholarship is a direct response to the unequal burden of unpaid care and domestic responsibilities predominantly shouldered by women, coupled with limited workplace flexibility and career interruptions. Recognising these contributing factors, we devised the Scholarship to counteract these challenges and guarantee that primary or sole caregivers are not disadvantaged due to their responsibilities.

This program underlines the Centre's commitment to fostering a more equitable environment by providing meaningful support to individuals who might otherwise face obstacles in their career progression. Through the Scholarship, we are actively working to mitigate the impact of care-related responsibilities on individuals' professional trajectories, ultimately contributing to a more balanced and inclusive workforce.

Purpose

The Centre is dedicated to the implementation of the IDEA Framework and its associated policies and procedures, and the appropriate, transparent, and impactful expenditure of the IDEA budget.

The Centre recognises that caring responsibilities, particularly those of Sole and Primary Carers, present major barriers in the undertaking of a Centre member's role and participation in professional development. This Guideline, referenced in the Participation and Inclusion Policy is in support of Centre members who incur additional financial costs to undertake their role in the workplace, due to caring responsibilities, through the provision of the IDEA Travel Scholarship Program.

Objective

The Objective of Scholarships is to remove the extraordinary financial barriers to the participation of Centre members in professional development events, particularly Sole Carers, Primary Carers, and persons from minority and underrepresented groups.

Scope

This Guideline applies to activities organised by the Centre for Centre members such as the annual Centre workshop.

The Guideline is to operate within Australian Tax Office (ATO) regulations and rulings, within university policy, and supports only expenditure that would meet the 'reasonable person test'.

Consistent IDEA Education

In 2022, a substantial undertaking involved the consistent dissemination of IDEA (Inclusion, Diversity, Equity, and Access) information throughout the Centre. This was achieved through a monthly newsletter orchestrated by our dedicated IDEA Officer. Each edition encompassed an educational video that expounded upon the fundamental principles of IDEA, coupled with insightful interviews that delved into various challenges within IDEA. The persistent delivery of this content ensured that IDEA remained at the forefront of our members' consciousness.

Throughout the year, a spectrum of topics was covered, including International Women's Day, International Day of Families, International Equal Pay Day, and other subjects that facilitated a comprehensive understanding of the gender imbalance within STEM fields. The newsletter's design facilitated easy comprehension and provided an ongoing resource that members could revisit at their convenience. By adopting diverse formats for information delivery, we successfully catered to different learning styles within our centre.

Analysing the engagement metrics of these newsletters and videos revealed a substantial interaction with both our internal members and external audience. Notably, the open rate of the newsletter escalated from a very healthy 83% at the beginning of the year to an impressive 95% by year-end. Similarly, the click-through rate experienced a significant boost, surging from 47% to 74%.



This upward trajectory in engagement is a clear indicator of the Centre's growing commitment to learning about and integrating IDEA principles throughout the year.

It's noteworthy that the video series within this initiative achieved a broader reach than initially anticipated. These videos were shared beyond our members, making their way into RMIT University and circulating within government agencies in Victoria. The series sparked meaningful conversations among our members, underlining their substantive impact on the evolving workplace culture within the Centre.

These can be seen here: [Youtube](#)

Online Training

Each year, the Centre requires members to engage in a range of IDEA workshops, training sessions, and discussions. This proactive approach ensures that our members are exposed to diverse programs and projects, contributing to a comprehensive and well-rounded education in the realm of Inclusion, Diversity, Equity, and Access (IDEA).

From the inception of the Centre, we've been dedicated to fostering a robust understanding of IDEA principles. Over the course of the three years since our Centre's establishment, we have engaged Symmetra, an online education and training platform. During this time, many Centre members have successfully completed a total of 12 modules, reflecting everyone's steadfast commitment to continuous learning and growth in this critical area.

In 2022, the Centre's commitment to IDEA education was reflected in the exceptional achievement of a 100% completion rate for our comprehensive IDEA training program. This training encompassed engaging Symmetra modules and insightful webinars hosted by Bree Gorman of Bree Gorman Consulting. Bree Gorman Consulting boasts a rich portfolio of collaborations with a diverse array of companies, offering expertise in diversity, equity, and inclusion strategies, policy evaluations, research initiatives, inclusion audits, and tailored training.

The training facilitated by Bree Gorman served to amplify our members' understanding of key concepts. It expanded upon topics that were already covered in Symmetra

Modules, such as Everyday Sexism, Building Cultural Intelligence, Diversity of Thought, and Inclusion in Meetings. By reinforcing these essential concepts through online workshops, the Centre bolstered its members' comprehension and engagement with these critical aspects of IDEA.

The combination of Symmetra's modules and Bree Gorman's workshops provided a well-rounded and enriched educational experience, ensuring that our members were equipped with a deeper understanding of the subject matter. This comprehensive approach speaks volumes about the Centre's dedication to providing our members with the knowledge and tools necessary to drive meaningful change in the domains of diversity, equity, and inclusion.



Online Modules completed:

Building Psychological Safety
Cross Cultural Intelligence
Debiasing Techniques
Disability Inclusion
Diversity of Thought
Everyday Inclusion

Everyday Sexism
Inclusion in meetings
LGBTIQ Inclusion
Psychological Safety
Behaviours
Unconscious Bias 101

A person wearing a white lab coat is working inside a biosafety cabinet. The cabinet has a glass front and various equipment inside, including what looks like a pipette and some containers. The background shows other laboratory equipment and a blue-tinted overlay.

Opportunity Four: Visibility

Beyond International Women's Day

In 2023, TMOS recognised the importance of consistently acknowledging and uplifting the women within our organisation, realising that confining such recognition to a single day was insufficient. Commencing on International Women's Day, the Centre embarked on a journey of spotlighting the achievements and stories of the women within our team throughout the entire year. This ongoing effort to amplify the contributions of TMOS's women underscores the profound significance of gender equity within our Centre.

While seemingly a modest initiative, this undertaking has yielded substantial transformations in our members' perception of gender equity, operating on a deeper level. By adhering to the notion that "you can't be what you can't see," the Centre has catalysed a heightened awareness among our members about the importance of showcasing and promoting the accomplishments of women. This has had a cascading effect, influencing how our members disseminate information both internally and externally.

Consequently, this approach has resulted in greater visibility for the women throughout our Centre, not just within the organisation but also in our external communications. The stories and achievements of Centre women are being shared more widely, fostering a culture of inclusivity, empowerment, and gender equality. This initiative exemplifies the Centre's unwavering commitment to fostering an environment where everyone's contributions are acknowledged and valued throughout the year, rather than just on designated occasions.



International Women's Day 2023

08 MAR, 2023

This year's theme aligns closely with our centre's ethos and is a great opportunity for us to celebrate and uplift the women who work in our centre. UN Women Australia's International Women's Day t ...



International Women's Day Continued

12 MAY, 2023

This year TMOS has decided to continue on the celebration of the women of our centre, from March 8th TMOS will highlight one of the women within our centre. Discussing why IWD is important, what this ...



International Women's Day Continued 2

09 AUG, 2023

This month we celebrate Niken Priscilla from the University of Melbourne. Niken's main interest is in materials science. Especially, in the area of nanophotonics. Besides that, she is also curious abo ...

Digital Visibility

Building on our sustained efforts following International Women's Day, the Centre embarked on an essential audit of gender equity within our communications and marketing strategies. While the Centre's prior focus on gender equity was certainly present, we recognised the need to delve deeper by analysing the statistics of our content. This comprehensive review of all external communications provided invaluable insights into areas where enhancement was warranted. A parallel assessment of internal communications is slated for completion within the upcoming 12 months.

Website: Examining the Centre website content since 2020 we identified a total of 66 news posts. Among these, 28.79% were centred around women, highlighting their contributions, and discussing topics relevant to women in STEM. While this percentage roughly aligns with the overall representation of women within our centre, we acknowledge the need for improvement to further elevate visibility.

LinkedIn: The Centre's active presence on LinkedIn, beginning in 2020 and creating 192 posts, has allowed the Centre to connect with the broader STEM community. Within these posts, 29.69% were dedicated to women-focused content, totalling 57 posts.

Reviewing the figures from both the Centre website and LinkedIn, it's clear that there is room for growth in terms of gender-equitable representation. Looking ahead, the Centre is committed to elevating this percentage annually in alignment with its overall marketing strategy. The Centre aims achieve gender equality in the messaging we disseminate externally by the year 2026. This commitment to change underscores our steadfast dedication to fostering an inclusive and balanced representation in all our communications.



InSTEM Participation and Leadership

In 2022, TMOS played a pivotal role in contributing to the organisation and development of InSTEM, a dynamic networking and career development conference aimed at individuals from marginalised or underrepresented backgrounds in STEM fields, as well as their allies. This remarkable initiative, created by ARC Centre EQUUS, and supported by the STEM-focused ARC Centres of Excellence community, showcased the sector's commitment to Inclusion, Diversity, Equity, and Access (IDEA). Notably, the Centre's IDEA Officer chaired the planning committee for the inaugural conference, and six Centre members participated in the enriching two-day event held in Brisbane/Meenjin.

This participation provided the Centre with a platform to extend its IDEA efforts to a broader audience. The positive feedback received was resounding, with attendees lauding the conference as one of the best they had experienced.

In 2023, the Centre assumed the role of Lead Organiser for InSTEM, underscoring our leadership within the sphere of diversity and inclusion. Spearheaded by our IDEA Officer, the conference has been brought to RMIT University in Melbourne/Naarm. This year, the event's impact is set to expand significantly, as the number of attendees has doubled, and the conference has been extended to three days. Building upon the success of the previous year, this expansion reflects the Centre and its collaborator's commitment to reaching and benefiting a wider audience.

By taking the helm as lead organisers, the Centre solidifies its position as a leader in the realm of IDEA, not just within our Centre, but also within the broader community of Australian Research Council Centres of Excellence. This progression underlines our Centre's dedication to driving meaningful change and fostering an inclusive environment across STEM disciplines. In 2024, the Centre will support the handover of InSTEM leadership to another STEM-focused Centre, to continue the evolution of this important event for the sector.



Participation and Inclusion Policy

As highlighted in Opportunity Three: Workplace Culture, the implementation of the Centre's Participation and Inclusion Policy stands as positive achievement. This multifaceted policy not only serves to foster an inclusive workplace culture but also contributes to heightened visibility for women within the Centre and the broader STEM industry.

The strategic guidelines delineated within this policy underscore our commitment to acknowledging and addressing the diverse needs and requisites of various demographics, including women. By tailoring our approach in alignment with these needs, we are actively working to ensure that women's contributions and perspectives are effectively integrated and recognised.

Ultimately, this policy is a testament to our dedication to creating an environment where everyone's voice is heard, valued, and given the opportunity to thrive. It reinforces the essential role that gender equity plays in shaping the Centre's dynamics and influencing positive change within the wider STEM landscape.

"Women do more than twice the amount of unpaid work in the home than men. This can include caring for children, the elderly and other family members. It can include cleaning, cooking, transportation and child care." <https://www.vic.gov.au/gender-equality-work-and-economic-security>

This can result in women being unable to participate or being excluded from numerous areas within the workplace, significantly reducing their visibility. The policy includes recommendations such as:

- Local meetings must be scheduled within reasonable business hours and accommodate carer activities of meeting attendees.
- Centre meetings, team meetings, and local events should be held between 10:00am and 4:00pm.
- Online meetings should remain an option.
- If the meeting organiser is unsure about the availability of attendees and their carers activities, they should ask rather than assume.
- Meeting Chairs are expected to take reasonable steps to ensure that all attendees have their say, and that fair expectations about meetings are set in advance (such as no interruptions).
- Centre seminars, including Colloquia, must be monitored for diversity to ensure a range of speakers and role models are visible to Centre members.
- All efforts must be made to ensure a diverse range of speakers are presenting.
- All efforts must be made to ensure a diverse range of members are volunteering to contribute their time, where this is required.
- Centre-run events will be held at locations that allow Centre members to fully participate in their role. This means:
- Centre members, if required, can bring a Support Person or their dependents (Dependent Child and/or Dependent Adult) and caregiver(s) (Primary Carer or Person with Care) and be allocated suitable family accommodation, including those that are Sole Carers.
- Established and senior career researchers as public figures, have a role to play in ensuring that diversity, including gender, ethnicity, and geography, are considered in speaking roles at events. Another aspect of this to also consider the personal and organisational reputational risk of presenting at events that are not sufficiently diverse.

Participation and Inclusion Policy

The policy statements the Centre has put forth encompass a broader spectrum of inclusivity considerations beyond women. As studies have highlighted, inequities in outside commitments can significantly affect women's engagement and participation in workplace activities. Recognising this, one of the most impactful steps we can take to enhance the visibility of women within STEM is to prompt our members to assess the equity of events they choose to attend and empower them to address any identified inequities..

To this end, we've provided our members with valuable guidance, including specific examples of challenges that can arise and practical approaches to redress these issues. By promoting awareness of these challenges and arming Centre members with actionable strategies, we are fostering a proactive stance towards creating more equitable environments. This not only encourages more women to actively participate but also lays the foundation for a more inclusive and diverse STEM community.

By broadening our focus to encompass various underrepresented groups, and by urging our members to champion equity, we are striving to establish a more inclusive, supportive, and balanced landscape within both the Centre and the larger STEM industry.

If diverse representation becomes an issue at an event, you can request that the organiser rectify this immediately while it is in the organisational stage or request that they pledge to do so for the next conference, for example "I have become

aware that the confirmed speakers at this event do not represent the diversity of our discipline. What actions are you taking to prevent this from happening next time (or is there time to address this now?), as beyond fairness and equity we must consider both the reputational risk to speakers, such as myself, and to this event if nothing changes."

By implanting this policy, we are providing tools to Centre members to action greater inclusivity within their workplaces, which results in greater visibility for women within STEM.



Quotes from TMOS Personnel

The Centre annual reports are a great place to champion the role of women within the Centre and discuss the progress we have made toward gender equity. Below are excerpts from our annual reports.

2020

“The Centre brings opportunities to push the boundaries in science and technology and to build and empower the next generation of scientists. One can invent alone; collaboration leads to innovation; but diverse teams will lead to disruptive innovation. As we work towards disruptive innovations in optics, diversity and inclusion are key pillars in our strategy.” - Professor Madhu Bhaskaran, IDEA Committee Chair

I’m very conscious of the long-term impact of the decisions we make today, and how this will impact the whole Centre and beyond. Students are major contributors to the scientific endeavour, so we need to have a clear strategy for engagement and recruitment over a variety of timescales.”
Professor Lan Fu, Education Chair

“A commitment to diversity is key to building the resilient education, research, and industry ecosystems we need in Australia.

A workplace that is balanced in terms of gender, ethnicity, age, and talents is more creative and productive. Diverse perspectives communicated safely drive new ideas and revolutionary approaches that you would not access otherwise.

It is not enough for me personally to state a commitment to diversity. We need more than words—we need to provide young women, like my daughter, with role models that show them that women belong in this field.

Therefore, we cemented Inclusion, Diversity, Equity and Access (IDEA) into the foundation of our organisation. We have a dedicated staff member, an IDEA Committee with funding, and a framework that will underpin our culture as a Centre. In 2020 we took steps to see that framework implemented with a women-only recruitment round for post-docs. There is a long way to go before we achieve equity in this field, but I am determined to relentlessly push for it.” - Professor Dragomir Neshev, Centre Director

Quotes from TMOS Personnel

2021

“Despite the difficulties with the pandemic, we managed to recruit a great group of students and postdocs. In 2021, the TMOS team included 15 new postdoctoral researchers and 11 new PhD students. I am very proud that the targeted women recruitment round resulted in a great boost of the gender diversity of the Centre, with the RMIT node reaching 50-50 equity. It is a great outcome, however, it is important for all of us to continue these efforts and propagate them through the entire team. These aspirations are now documented in the TMOS Strategic and Implementation Plan, which further describes our Research, Translation, Education, Mentoring, and Outreach vision.” - Professor Dragomir Neshev, Centre Director

“We take great pride in being a vibrant group who collaborate widely (both cross disciplinary and cross-sector). We celebrate our gender and cultural diversity and benefit from diverse voices and perspectives around the table.” - Professor Sharath Sriram, Chief Investigator.

“In terms of hitting our 2021 goals, we have:

- Recruited at least 30% women personnel in the Centre.*
- Established the IDEA Framework and the Strategic and Implementation Plan.*
- Driven IDEA literacy through the online modules.*
- Worked towards establishing a Career Respark Program to offer short term positions to people returning to work following a career interruption. Establishing carer support grants is an action item which has been taken forward to 2022 when we expect more travel and in-person activities to resume. It has been a packed 2021, during which technology has enabled us to deliver on our IDEA goals across our nodes. We look forward to a 2022, when more face-to-face interactions will be possible to put our learnings into action and to promote a higher sense of belonging among our members.”*

Professor Madhu Bhaskaran, IDEA Committee Chair

Quotes from TMOS Personnel

2022

“2022 was a year in which we focussed on embedding IDEA principles more firmly in the operations of TMOS. 2022 also saw the introduction of the Centre wellbeing and family policies. While working on these policies we realised they needed to be reshaped into the Participation and Inclusion Policy. Under this policy we have also created the Carers Scholarship Program; this program has been established to support our members who have caring responsibilities. This program will support our members financially to allow them to participate fully. The purpose of this policy is to provide expectations and guidance for Centre leadership and members on the minimum standards for ensuring that we reduce the barriers to workplace participation and inclusion and build community in alignment with the Centre IDEA Framework. Within this policy are guidelines for our members to adhere to such as inclusive meeting planning and checking D&I practices when attending conferences.”
Professor Madhu Bhaskaran, IDEA Committee Chair

“We have also continued to be conscious of our Associate Investigators (AI), ensuring that for any new man there is at least one new woman brought into our team. This has meant we have more exciting emerging leaders of all genders across the world involved in our Centre as AIs.” Dr. Mary Gray, Chief Operations Officer.

2023

“I’m delighted that TMOS as a Centre is deeply committed to inclusion and diversity. Science and engineering benefits greatly from a community that approaches problems in a variety of creative ways. A diverse community drives excellence, and is better able to generate new research methods, explanations and ideas, which can help science overcome challenging hurdles and shed new light on problems. Paradigm shifts and revolutionary thinking rarely arise in a homogenous environment. So, it’s not just a moral obligation to meet equity goals and national needs, but important for the construction of knowledge and for the enterprise of science itself. In my day job, I’m a huge advocate for diversity and inclusion across space and technology just as I am passionate about leadership development, communication for impact, and collaboration for innovation success.” – Mani Thiru. Head of Space & Satellite, Asia Pacific, Amazon Web Services

A photograph of two young women standing behind a conference booth. The woman on the left is wearing glasses and a dark top, holding a small bowl. The woman on the right is wearing glasses and a patterned dress. They are both smiling. The background shows a poster with the title 'Nanoparticles + ... = more accurate ...' and 'trophic plaques'. The entire image is covered with a semi-transparent blue overlay.

Opportunity Five:Education

Outreach

The efforts of the Centre's Outreach Committee stand as a testament to our commitment to gender equity in STEM. On July 11th 2022, the Melbourne team undertook an impactful initiative at the Bendigo Discovery Centre, delivering a specialised workshop focused on girls in STEM. This on-site session included an engaging hands-on hologram workshop, coupled with discussions about STEM careers and the unique journeys taken by our outreach team members. The aim was to not only educate the younger generation about the significance of gender equity within STEM but also to inspire young girls to consider pursuing STEM fields in the future.

Through initiatives like the Outreach Committee, the Centre is actively participating in shaping the next generation's perspective on gender equity and its importance in STEM. This committee spearheaded by Camilla Gazzana and Professor Igor Aharonovich from University of Technology Sydney, boasts a remarkable representation of 60% women. This composition serves as a powerful visual representation of the fact that women and girls are not only welcomed but also core contributors to the STEM domain.

Additionally, the Outreach Committee is dedicated to enhancing its own understanding of gender equity while strategically targeting programs aimed at girls in STEM. This dual focus underscores the Centre's holistic approach to driving meaningful change and cultivating a more inclusive and balanced STEM community from the ground up.

Information Sharing

Since its inception, the Centre has steadfastly embraced a policy of information sharing, particularly in the realm of IDEA. This ethos is grounded in the belief that sharing knowledge collectively elevates us all. Over the span of the past three years, the Centre has proactively extended our policies and procedures to other Centres of Excellence and universities. This willingness to share has propelled the Centre to a leadership position within the IDEA sphere, earning recognition as a trailblazer among Australian Research Council Centres of Excellence..

Furthermore, our commitment to sharing extends beyond documents. We've also made a concerted effort to disseminate the content we've generated pertaining to IDEA and gender equity. Spearheaded by the IDEA Officer, an array of educational materials has been created, and we've been proactive in sharing these resources both internally across universities and with external institutions. By broadening the reach of this content, we're actively contributing to a larger movement aimed at fostering understanding and progress within the wider community.

The Centre's ethos of information sharing embodies our dedication to driving change beyond our Centre's boundaries. It showcases our commitment to nurturing a culture of collaboration, transparency, and advancement, ultimately propelling the agenda of gender equity forward on a broader scale.



Opportunity Six: Industry Action

Women Only and Women First

The efforts made by the Centre to achieve gender equity have rippled through our immediate networks, particularly influencing our affiliated universities. Our strategies, such as the Women Only recruitment round and the Women First policy update, have not only instigated notable changes but have also set a precedent for targeted hiring practices. Within the Australian National University, the original Centre Recruitment Policy and Procedure became the foundation of the College of Science Hiring Equity Guideline, which required research schools to provide a gender hiring strategy and implementation plan to be evaluated annually. The Women First policy update championed by the Centre's Chief Operations Officer, Dr Mary Gray, has also garnered significant attention and support, leading discussion about adoption a similar policy across the entire School of Physics. This remarkable shift exemplifies the type of tangible change that the Centre is actively working towards, and by showcasing the positive outcomes of such measures, we're effectively furnishing quantifiable evidence that supports our advocacy for greater gender equity.

Additionally, the impact of our Women Only recruitment round extended to our RMIT University, supporting RMIT's attainment of a SAGE Cygnet Award. This recognition further underscores the tangible success that can arise from targeted gender equity initiatives.

In essence, the strides the Centre has made within the realm of gender equity are demonstrably influencing change within

our immediate spheres, while simultaneously providing a compelling case for the broader movement towards greater gender equity.

These successes stand as testament to the power of dedicated initiatives and collaborative efforts in reshaping the landscape of gender equity within STEM.

“Special Measures recruitment, where women/gender-diverse only recruitment rounds were held for certain positions. This increased the proportion of applications from women across STEM by 9 per cent over the intervention period from 2018 to 2021, with STEM College's School of Engineering and the School of Health and Biomedical Sciences reporting the greatest increase of 11 per cent.”

The Centre's proactive approach to addressing gender equity through specialised recruitment rounds has set us apart as a leader in this initiative. Our distinct efforts have played a pivotal role in influencing the broader landscape of gender equity within STEM at RMIT. By taking decisive action, we've significantly contributed to elevating the representation of women in STEM fields within the RMIT community.

This impactful contribution speaks to our commitment to fostering a more inclusive and balanced STEM environment. The Centre's proactive stance in addressing gender equity through targeted recruitment rounds stands as an example for others to follow, as we collectively work towards reshaping the future of gender balance within STEM fields.

Our IDEA Director Madhu Bhaskaran Speaking at Victorian Parliament

Held on International Day of Women and Girls in Science, the event canvassed women's participation in science, technology, engineering and mathematics (STEM).

Presented as a joint initiative by the Parliament of Victoria, the Royal Society of Victoria, Victorian Parliamentarians for STEM, the Commissioner for Environmental Sustainability Victoria, and Inspiring Victoria, the discussion was also live streamed to an online audience who, together with the audience in the Legislative Council chamber, asked plenty of thought-provoking questions.

Hosted by science journalist Natasha Mitchell, the panel tackled a variety of topics including the gender disparities impacting STEM, the barriers to leadership women commonly face, and the ways Victoria's education system can evolve to further foster interest for the sciences in young girls. Professor Madhu Bhaskaran, a research leader at RMIT University, said the task of addressing gender disparity shouldn't 'rest on the shoulders of women'.

This level of visibility achieved by Professor Madhu Bhaskaran has a considerable impact on the pathways for gender equity in STEM.

'I know we're fighting for representation, and we're fighting to be on the right tables and for the right decisions to be made, but this is a people's problem. It is not a women's problem,' she said.'



Associate and Partner Investigator Review

In 2022, TMOS initiated a comprehensive review of its Associate and Partner Investigators (AI and PI), with a specific focus on gender equity, the groundwork of which was established in the Centre's Associate and Partner Investigator Policies in 2021. This review marked a significant milestone, as it was the first opportunity since the Centre's establishment to evaluate our engagement with the STEM industries and address the representation within our senior ranks.

The outcomes of this AI and PI review have been pivotal. Recognising the need for a more balanced representation, we proactively reached out to invite more women to take on roles as AIs with the Centre, and to enforce strict requirements for active collaborations, which are reviewed every two years. This approach requires us to actively cultivate relationships with women professionals in STEM, underscoring the necessity for broader change within our industry.

This effort to increase gender equity among AI and PI cohorts not only reflects our unwavering commitment to gender equity within our own centre but also highlights our dedication to



driving gender equity within the broader STEM landscape. By achieving greater gender balance among AIs and PIs, we are making a public statement of our

commitment to advancing gender equity in STEM, amplifying our role as advocates and catalysts for change. This initiative exemplifies our continuous commitment to fostering inclusivity, diversity, and gender equity within both our centre and the wider STEM community.

Women in STEM - Decadal Plan Champion response 2023