



MONASH
University

Professor & Director of
the Monash Centre for
Electron Microscopy

Candidate Pack

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01. Executive Summary

Monash Centre for Electron Microscopy (MCEM) is a central university research platform and is part of the national grid of Microscopy Australia facilities.

The mission of MCEM is to enable and advance research excellence at Monash University and beyond, through the provision of a world-class research capability in electron microscopy for the determination of the structure of matter down to the atomic scale.

MCEM achieves this through the execution and delivery of world class research, expertise, instrumentation, and education in electron microscopy to researchers across all fields of science and engineering (optimised for non-biological matter).

The Centre provides a research capability to several hundred registered researchers from Monash University, other universities, government research agencies and industry, and plays an important role in educating postgraduate students in electron microscopy.

The Director of the Monash Centre for Electron Microscopy (MCEM) is a senior leadership position responsible for enabling and supporting the University's strategic initiatives and broad research aspirations by leading research excellence at MCEM. The Director is responsible for leading the provision of a world-class research capability in Electron Microscopy and the delivery of world class research programmes in the field of Electron Microscopy.

They will hold an adjunct role within a faculty aligned to their technical background to provide an organisational home to undertake research activities. The Director has direct management responsibility for key Monash staff within MCEM, including the MCEM General Manager, as well as their own research group members within their faculty.

As a Level E research-only academic, they will be expected to exercise a special responsibility in providing leadership and in fostering excellence in research in their area of research, in the organisation unit, within the University and within the scholarly and general community.

Monash University welcomes and values diversity. The University encourages applications from First Nations people, culturally and linguistically diverse people, people with disabilities, neurodiverse people, and people of all genders, sexualities, and age groups.

Monash University is being assisted in this appointment process by the executive search firm Society. To book a confidential conversation, contact Alyce Brogan at alyce.brogan@society-search.com or call +44 (0)20 3653 0475. To apply online please upload your CV via Society's website [here](#).

The deadline for receipt of applications is 11.55pm AEDT on Friday 8 March 2024.



02. About Monash University

Monash University is a modern, global, research-intensive university, delivering education and research excellence. They are making a positive impact on today's global challenges – whether that is by mitigating climate change, easing geopolitical insecurity, or fostering healthy communities.

At Monash, work feels different. There is a sense of belonging, from contributing to something groundbreaking – a place where great things happen. You know you are part of something special and purposeful because, like Monash, your ambitions drive you to make change.

The University has a clear purpose to deliver groundbreaking intensive research; world-class education; a global ecosystem of enterprise – and they activate these to address some of the challenges of the age, Climate Change, Thriving Communities and Geopolitical Security.

Monash University welcomes and values difference and diversity. When you come to work, you can be yourself, be a change-maker and develop your career in exciting ways with curious, energetic, inspiring, and committed people and teams driven to make an impact – just like you. Together with their commitment to academic freedom, you will have access to quality research facilities, infrastructure, world class teaching spaces, and international collaboration opportunities.

The University champions an inclusive workplace culture for their staff, regardless of ethnicity or cultural background. Monash has also worked to improve gender equality for more than 30 years. Join the pursuit of our purpose to build a better future for ourselves and our communities – #Changelt with us.

Monash Research Infrastructure

The **Deputy Vice-Chancellor (Research) and Senior Vice-President (DVCR)** is responsible for the development, implementation, and continuous improvement of the University's research vision within the changing landscape of higher education, ensuring delivery of accountabilities within the context of the

University's strategic plan. Reporting to the President and Vice-Chancellor, and as an integral member of the University's executive team, the DVCR further advances the University's research performance, diversifies research funding, oversees research infrastructure strategy, and fosters interdisciplinary and transdisciplinary areas of excellence, collaboration, and innovation within Monash and with global research partners. Further information about the University's organisational and governance structure is available [here](#).

The **Office of the Pro Vice-Chancellor (Research Infrastructure)** is responsible for managing the development and implementation of infrastructure strategy, which is aligned with the University's grand challenges as well as the needs of industry. This places Monash in the best position to address the major scientific, technical, and social challenges and opportunities facing Australia now and in the future. Investing in leading-edge infrastructure and equipment supports the University's research and helps us achieve our vision. We are attracting funding from various sources and developing strategic partnerships with major industry partners. Coordinated by the Office of the Pro Vice-Chancellor (Research Infrastructure), Monash University has established a network of core Monash Research Platforms (MRP), including the Monash Centre for Electron Microscopy (MCEM). As part of this, the University aims to operate core research platforms, comprising cutting-edge capabilities and promoting cross-disciplinary and cross-organisational collaborative research. Each of the MRP's comprise world leading technologies, strong management, and governance to provide access to high-quality, specialist research services and expertise to the broad research community and industry.

02. About Monash University Continued

The Monash Centre for Electron Microscopy (MCEM) is an internationally recognised facility that is part of the Monash suite of research platforms. It provides a world-class capability in electron microscopy to enable researchers to solve major scientific challenges.

Monash Centre for Electron Microscopy

MCEM conducts innovative research in electron microscopy, and provides advanced instrumentation, expertise, and training to researchers from across the university, government, and industry sectors.

In 2018, on the occasion of its 10th anniversary, MCEM collated a small snapshot of just some of the resulting research impact in [this brochure](#). MCEM together with the Monash Ramaciotti Centre for Cryo-Electron Microscopy form the Victorian Node of [Microscopy Australia](#).

The Monash research platforms are coordinated through the Office of the Pro Vice-Chancellor (Research Infrastructure).

MCEM Platform Vision

To be at the forefront of research in electron microscopy, providing a leading-edge capability that will enable researchers to solve major scientific challenges.

MCEM Platform Mission

To enable and advance research excellence at Monash University and beyond through the provision of world-class electron microscopy for the determination of the structure of matter down to the atomic scale.

MCEM achieves this through the execution and delivery of world class research, expertise, instrumentation, and education in electron microscopy to researchers across all fields of science and engineering (optimized for non-biological matter).

MCEM is the largest electron microscope facility in Victoria, Australia. In a typical year, around 400

researchers make direct, hands-on use of MCEM's instrumentation, executing electron microscopy experiments for research programmes that range from ancient pottery to aerospace alloys, batteries to biomaterials, catalysts to cement, drug delivery to Dirac materials, food to ferroelectrics, minerals to magnetism, paper to polymers, solar cells to superconductors, quantum dots to quantum computers, and so on. This includes the research programmes of ~20 national Australian Research Council (ARC) Centres of Excellence and ARC Industrial Transformation Research Hubs and Training Centres.

Each year, MCEM teaches around 120 new hands-on users the fundamentals of electron microscopy, specimen preparation and interpretation and provides advanced workshops on specialist topics. MCEM also runs a seminar series with international speakers.

MCEM reports its research impact to Monash University and external funding agencies via metrics, such as the field weighted citation impact of publications arising from the use of MCEM (FWCI is ~2), and via qualitative measures such as the research centres, grants, patents, industry, and international collaborations it has enabled and supported and the quality of EM teaching it has delivered.

MCEM provides a key complementary facility to the Australian Synchrotron and the Melbourne Centre for Nanofabrication (MCN) (the Australian National Fabrication Facility's (ANFF) central node in Victoria), which are both within a short walk of MCEM. MCEM works closely with The Monash Ramaciotti Centre for Cryo-Electron Microscopy and Monash Micro Imaging (MMI) which respectively provide electron and optical microscopy facilities optimised for the biological sciences.



MCEM Staff

Professor Joanne Etheridge, the founding Director of MCEM, has stepped down from the role to take up the award of an Australian Research Council Laureate Fellowship and, as such, there is a need to recruit a new Director of MCEM.

The MCEM team, employed under the Office of the PVC (Research Infrastructure), consists of 13.2 full time equivalent staff, comprising the Director and General Manager, 4 academic staff, 5.2 microscope scientists, a microscope engineer, and an office coordinator. A variety of responsibilities are distributed across this team, including microscope management and maintenance, teaching and hands-on training, specimen preparation support and maintenance, EM software support and EM technique development. (Note that microscopes are serviced via manufacturer maintenance contracts.)

In addition to MCEM staff, Monash University has several other academic staff employed under the Science, Engineering and Medical Faculties who also lead research programmes in the theory and development of electron microscopy techniques and the physics of imaging. This contributes to a vibrant, internationally regarded community of expertise on campus that further advances the capability provided by MCEM.

For more information visit monash.edu/researchinfrastructure/mcem.

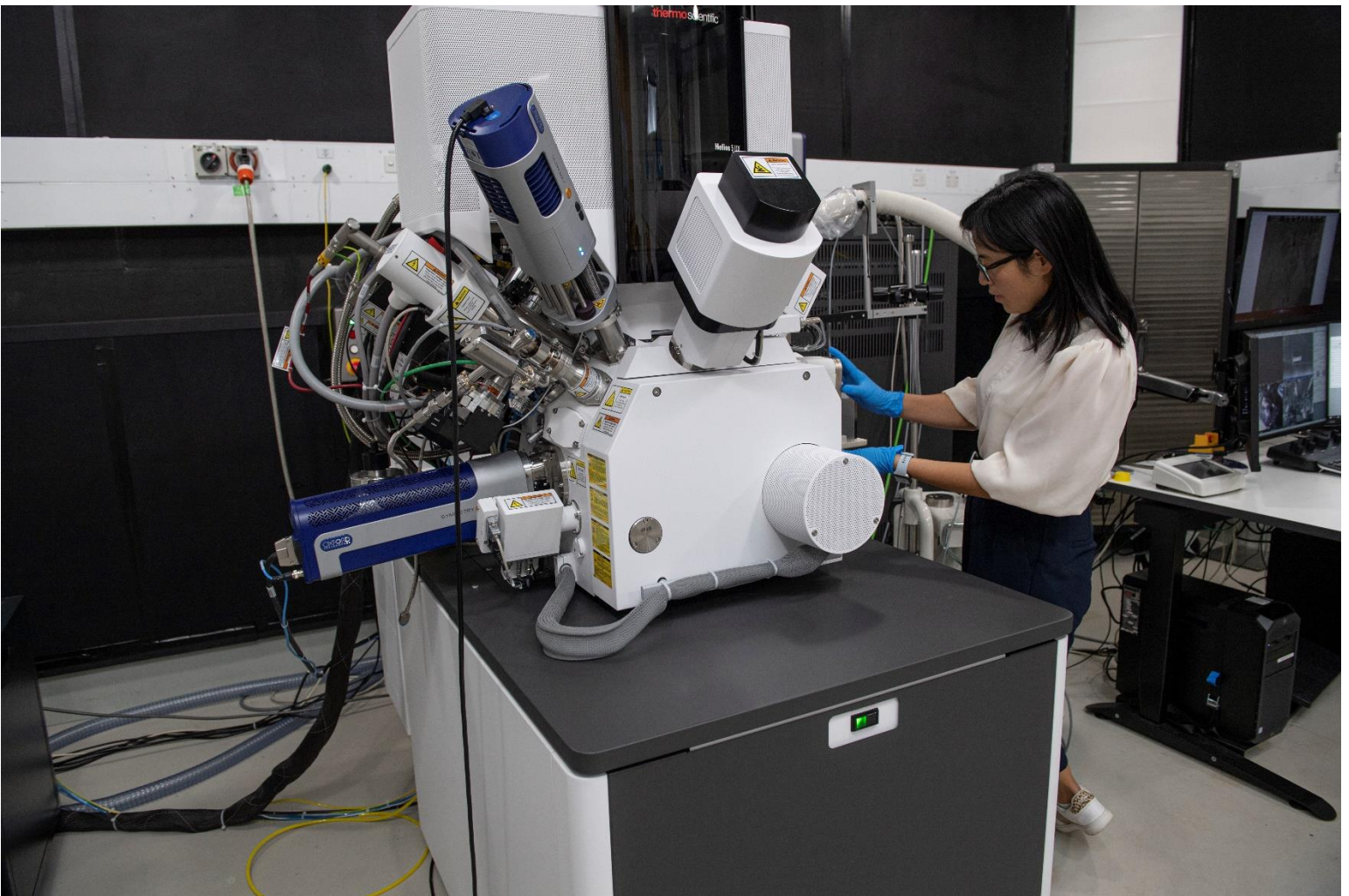
Bios of additional faculty members can be found [here](#).

MCEM Instrumentation

The MCEM comprises expert staff and a suite of advanced instruments, including 4 TEMs, 3 SEMs and 2 FIB / SEMs. The TEM capability includes the Spectra-Phi – a custom-designed next generation FEG-TEM with outstanding spatial and energy resolution and multiple fast detectors and a double-aberration-corrected Titan3 80–300kV FEG-TEM. The SEM and FIB capability covers high resolution, low vacuum, ESEM, cryo transfer, EBIC, and analytical capabilities including EDX / EBSD, angle-resolved CL and ToF-SIMS. In 2024, MCEM will install an in-situ large-scale mechanical straining SEM, a high-performance analytical SEM and will procure a new analytical TEM. This suite is supported by a range of specimen preparation, software, and computing equipment plus access to high performance computing at the Monash eResearch Centre.

Location

MCEM is located on the Clayton campus in Melbourne in a dedicated ultrastable electron microscopy building, purpose-designed to provide exceptional mechanical, thermal, and electromagnetic stability to optimise instrument performance. The building is within walking distance of the adjacent Ramaciotti Centre for Cryo-Electron Microscopy, the Australian Synchrotron, and the Melbourne Centre for Nanofabrication (MCN). To learn more about MCEM please visit our [website](#).



03. Role Description

The Director of MCEM directly reports to the Pro Vice-Chancellor (Research Infrastructure). Moreover, they will also be accountable to relevant MCEM governance, through which high-level strategic directions will be established and performance evaluated.

The Director of MCEM is responsible for leading the provision of a world-class research capability in Electron Microscopy and the delivery of world class research programmes in the field of Electron Microscopy (EM). They will hold an adjunct role within a faculty aligned to their technical background to provide an organisational home to undertake research activities.

The role is responsible for developing and directing EM capabilities to support the University's research aspirations and ensuring that MCEM is positioned to respond to the needs of researchers.

The Director will be at the forefront of the development of new electron microscopy techniques, with a broad and deep understanding of current and emerging EM techniques and technologies. They will bring a real vision for EM developments, with the ability to identify the key directions that these should take to deliver the greatest scientific impact. The Director will keep abreast of the current and emerging needs of the broad research community to ensure MCEM provides a cutting-edge capability that can meet these needs. They will further advance the MCEM's national and international reputation, fundamentally positioning the facility to successfully draw funding from national and international bodies.

The Director has direct management responsibility for key Monash staff within MCEM, including the MCEM General Manager, as well as their own research group members.

Key responsibilities will include:

Academic Professoriate

- Actively engage in a specialist research area in line with MCEM's focus, by maintaining an active publications record (in high-quality refereed journals) and supervising and mentoring early

and mid-career researchers and higher degree by research (HDR) students;

- foster research excellence through procuring competitive research grants, leading research projects, development of research policy, financial management of grants and working with other staff to develop research links.

Strategic Leadership and Engagement

- Develop, review and maintain the MCEM strategy, business and operational plans to align with and help deliver the Monash strategy;
- ensure MCEM maintains a strong, active and internationally competitive research program in EM; and position Monash to take a lead role in national and international EM research initiatives;
- coordinate multi-disciplinary expertise and undertake activities both within and beyond MCEM to maximise research outputs and impact;
- actively contribute to the attraction, development, and retention of research talent;
- maintain and influence strong relationships with the Commonwealth and State governments as well as the local and national EM communities to ensure Monash is well positioned to attract infrastructure funding and future investment;
- provide strategic leadership in addressing the interface of university-based research with industry, including professional promotion and marketing of Monash's EM research capabilities;
- keep abreast of international trends to ensure Monash is an early adopter of leading-edge electron microscopy infrastructure, including being involved in the development of relevant electron microscopy methods to support this leadership position;
- represent Monash University, MCEM and the Clayton precinct generally in strategy development forums at local, national and international levels, for EM;

- provide leadership and represent Monash within Microscopy Australia to ensure Monash is a successful Microscopy Australia node and partner.

Partnerships and Strategic Alliances

- Manage linkages with global industry partners and other global and national research organisations/networks in relation to EM and collaboration opportunities;
- work with the Pro Vice-Chancellor (Research Infrastructure), the Director of Research Infrastructure and relevant Academic Directors to develop and implement strategies to stimulate investors, granting bodies and government on scientific, community and commercial opportunities;
- maintain a public profile in government and industry sectors and ensure that the University's reputation for research excellence and high ethical standards is enhanced;
- contribute to or chair relevant project steering committees and provide strategic advice and direction to projects and organisations; provide expert advice on project charters and other project documentation as well as advisor/reviewer for EM programmes in other Universities globally.

Operational Management

- Work with the MCEM leadership team to ensure that MCEM operates within an open-access model, delivering high quality and consistent electron microscopy access that meet the needs

of the research community and fulfils ISO9001 certification requirements;

- coordinate a user base of researchers to maximise the application of MCEM for use by Monash, our collaborators, and other external users;
- work with the General Manager, to prepare reports, papers, and statistics for internal and external purposes, including compiling, drafting and coordinating strategy and performance progress reports and return on investment reports to the University, state and federal government and other stakeholders, as required;
- work with the General Manager to evolve the MCEM operational model to ensure enhanced financial sustainability through consistent costing and fit-for-purpose pricing models;
- review and maintain systems, policies and procedures to ensure a consistent and unified approach to the management of MCEM;
- ensure performance reviews and reporting mechanisms are implemented across MCEM;
- provide performance management and staff development opportunities;
- other duties as directed from time to time.

Supervisory Responsibilities

This position provides direct supervision to approximately 5 MCEM staff and oversight of approximately 15 MCEM staff in total, plus supervision of their own research group members.

Additional Information

- Travel to other campuses of the University may be required;
- there may be a requirement to work additional hours from time to time;
- there may be peak periods of work during which taking of leave may be restricted.

Governance

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure, and inclusive.

Ensure you are aware of and adhere to university policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all its activities in Australia and internationally.



04. Person Specification

The successful candidate will be expected to demonstrate evidence of the following skills, capabilities, and experience:

Education/Qualifications

- A doctoral qualification in a relevant discipline, or equivalent accreditation and standing, together with subsequent research experience and is recognised as a leading international authority in electron microscopy.

Knowledge and Skills

- Outstanding, active, and internationally recognised research program and track record in electron microscopy;
- demonstrated strategic planning and management skills, preferably within a research-intensive environment;
- experience in the provision of an electron microscopy capability (expertise and instruments), demonstrated by intimate knowledge of the necessary skills, equipment, operating environment, and new technology directions;
- demonstrated ability to generate research income from traditional and/or more innovative sources of funding, including government, philanthropy, and industry;
- outstanding interpersonal, communications and public relations skills with the ability to liaise and work with university staff and students and external stakeholders, including senior government and industry representatives, and to represent Monash University externally at the highest level;
- experience in building and managing external relationships with industry partners, potential investors, stakeholders, and government authorities;
- resource, organisational and people management skills, including the ability to build effective, high-performance, results-based teams and a strong record of successful supervision of honours research projects and postgraduate research projects;
- evidence in developing, leading, and finishing collaborative and interdisciplinary research projects and the ability to foster a research culture based on excellence and integrity;
- evidence and commitment to the promotion of electron microscopy as a discipline to potential researchers and the wider community.



05. Appointment Details and How to Apply

Monash University is being assisted in this appointment process by the executive search firm Society (www.society-search.com).

Applications should consist of:

1. a concise covering letter (ideally no longer than two pages), addressing the criteria in the Person Specification;
2. an up-to-date curriculum vitae;
3. names and contact details of three referees (although referees will only be approached at the final stage of the process, and only with your express permission).

General advice on how to write a [strong CV](#) and [strong covering letter](#) can be found on our website.

To upload your documents via Society's website, [click here](#).

The deadline for receipt of applications is 11.55pm AEDT on Friday, 8 March 2024.

Shortlisted candidates will be invited to interview in late March 2024.

An appointment will be made subject to receipt of satisfactory references. The appointed candidate will be offered a salary that is commensurate with their experience and the seniority of their new role.

We are committed to ensuring that anyone can access our application processes. This includes people with hearing, sight, mobility, and cognitive impairments. Should you require access to this document in an alternative format, wish to apply in a different format, or need any other reasonable adjustments made for you (including at interview), please contact us at inclusion@society-search.com. We also welcome suggestions or comments about any more general access improvements we should consider.





Society

Global Executive Search

Society is a global executive search firm and a certified B Corporation. 10% of our profits go to charitable causes through The Society Foundation. With colleagues in the United Kingdom, the United States, and New Zealand, we solve senior hiring challenges for responsible businesses and purpose-driven organisations around the world.

We believe that the right candidate, placed in the right organisation at the right time, can initiate a chain reaction of transformative change that will help to deliver a more inclusive and sustainable future.

Certified



Corporation