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## POSITION DESCRIPTION

# Director, X-ray Facility, MWAC

Faculty/Division	DVC-Research and Enterprise
Classification Level	Academic C or D
Hours & Span (Category)	ACADEMIC POSITION NO SPAN
Position number	ADMIN ONLY
Shiftwork status	NOT SHIFTWORKER
Allowances	N/A
On call arrangements	N/A
Original document creation	30 April 2024

### Position Summary

The X-ray Facility is part of the highly successful Mark Wainwright Analytical Centre (MWAC), a multidisciplinary instrumental core facility base at the Kensington Campus of UNSW Sydney supporting researchers in Science, Engineering and Medicine. The X-ray Facility is one of the largest of its type in Australia with 12 experienced staff and 18 major instruments across five laboratories supporting >500 researchers at UNSW and nationally as well as, servicing a wide range of commercial clients. The Facility offers a comprehensive suite of laboratory-based X-ray techniques: small molecule crystallography, powder and thin-film X-ray diffraction, high-energy micro-CT, X-ray absorption spectroscopy, analysis and microscopy using X-ray fluorescence, and surface analysis using X-ray photoelectron spectroscopy and ToF-SIMS. Materials researchers are key stakeholders that drive the strategy for new X-ray capability in the Facility and the MWAC has recently invested \$3.5M to upgrade key instrumentation in the facility to recognise this.

The Director of the X-ray Facility will take a leading role in the development of a strategy for X-ray science at UNSW, manage the operations, core business and staff of the facility to support researcher and industry access, as well as, foster collaborations, and partnerships with complementary facilities. The Director of the X-ray Facility will have an advanced knowledge and a proven track record of one or more of the X-ray techniques offered by the facility and will take a leading role in developing advanced techniques, plan for new capabilities, liaise with stakeholders, as well as coordinating external grant funding for research infrastructure.

The role of Director, X-ray Facility reports to the MWAC Executive Director with direct reports from the five laboratory managers in Crystallography, XRF, XRD, micro-CT and Surface Analysis.

## Accountabilities

Specific accountabilities for this role include:

Level C:

- With the MWAC Executive Director, develop and execute a strategy for X-ray science at UNSW aligned with the universities overall research goals.
- Engage in independent and collaborative research projects with a focus on X-ray methods.
- Manage the operations and core business of the X-ray facility including the provision of advice, high quality service and research support to key stakeholders in the facility.
- Lead and guide a team of research scientists, technical and professional staff, ensuring excellence and innovation in the X-ray facility.
- Support researcher access, foster collaborations, and partnerships with complementary facilities at the Australian Synchrotron, Centre for Neutron Science at ANSTO, Lucas Heights and other National core X-ray facilities.
- Strategically plan for new capabilities, provide expertise, and lead research infrastructure grants for the development of new X-ray applications for research.
- Prepare, contribute to, and oversee publications, projects, and reports as required.
- Provide collaborative research support and analytical services, with a strong focus on excellence and research integrity to internal and external stakeholders, as well as commercial clients.
- Train and supervise research staff and participate in the delivery of short courses on X-ray techniques and lectures as part of a School if required.
- Work closely with our Chemical Consulting Laboratory and liaise directly with industry clients to support and grow the commercial X-ray service.
- Contribute to the management and broader activities of the Mark Wainwright Analytical Centre and Division of Research and Enterprise as required.
- Align with and actively demonstrate the [UNSW Values in Action: Our Behaviours](#) and the [UNSW Code of Conduct](#).
- Ensure hazards and risks psychosocial and physical are identified and controlled for tasks, projects, and activities that pose a health and safety risk within your area of responsibility.

Level D (In addition to Level C duties):

- Take a lead role in designing, implementing and overseeing the strategy in the X-ray Facility at UNSW.
- Establish and run a vibrant research program with X-ray techniques at its core.
- Lead research experiments, in collaboration with research groups and industry partners.
- Engage and network effectively with external University, Government and other Agencies relevant to X-ray science research infrastructure
- Provide high quality supervision or co-supervision of honours and postgraduate research projects.

- Lead the writing of publications, project and infrastructure grants and reports.
- Contribute to the leadership of the Mark Wainwright Analytical Centre, and School or Faculty level, commensurate with a Level D University appointment.
- Make significant contributions to the profession/discipline.

## Skills and Experience

Level C:

- A PhD and recognition as a leading authority in the discipline of Material/Chemical/Physical Sciences aligned with the mission of the Mark Wainwright Analytical Centre.
- Demonstrated track record in research commensurate with the academic level of appointment, with demonstrated expertise in use of X-ray techniques for research.
- Demonstrated track record of research publications.
- Excellent interpersonal and communication skills demonstrated initiative and ability to work cooperatively within a team environment.
- Experience in training, teaching and supervising others within a multiuser research environment whilst managing resources and research infrastructure effectively.
- Experience with sample preparation for analysis of a range of samples and with software used for analysing data in X-ray science.
- Ability to assist in developing a forward-looking strategy and vision for X-ray science at UNSW.
- Experience in fostering collaborative research, with outcomes of high quality and impact and demonstrated capacity for research leadership.
- A record of competitive external funding for research infrastructure and collaborative research activities.
- Demonstrated experience in budget management and major equipment procurement.
- Knowledge of research ethics, integrity, and compliance requirements.
- Knowledge of commercial X-ray science industry applications and experience in effective management and delivery of commercial services for industry.
- Demonstrated ability to contribute more broadly to activities and priorities of the Mark Wainwright Analytical Centre, and the School / Faculty of affiliation.
- Ability and capacity to implement required UNSW health and safety policies and procedures.
- An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.
- Knowledge of health & safety (psychosocial and physical) responsibilities and commitment to attending relevant health and safety training.

Level D (In addition to Level C):

- High-level project management experience with a demonstrated ability to plan, oversee and manage projects involving scientific and technical staff.
- Strong influencing and negotiation skills with demonstrated ability to build both internal and external relationships and networks.

- A record of successful student and post-doctoral fellow supervision
- Experience in leading, developing and managing academic and professional staff, including proven change management leadership.
- Demonstrated success leading competitive external funding to local and national research infrastructure initiatives as well as, for individual and collaborative research.

#### About this document

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.