Position Description

Position Title: Director, Centre for Astrophysics and Supercomputing
Position Number: 30812
Classification: Academic Level E (Professor)
Faculty/PAVE Centre/Organisational Unit: FSET/CAS
Department: Physics and Astronomy

Position Purpose

The Director provides academic and research leadership to staff in the internationally renowned research centre, the *Centre for Astrophysics and Supercomputing (CAS)*, located on the Hawthorn campus of Swinburne University of Technology in Melbourne, Australia. The Director appointment will be for a term of 5 years and will be associated with an on-going Level E Professorial position.

Vision Statement of the Centre:

The Centre for Astrophysics and Supercomputing (CAS) is dedicated to inspiring a fascination in the universe through research and education. We aim to understand how the universe around us came to be and determine the nature of the physical laws making it work. By pursuing this work we will enable technology development, train the next generation of physical scientists and inspire the public.

Mission Statement of the Centre:

- To undertake world-leading and internationally recognized research in astronomy and astrophysics in both the observational and theoretical domains.
- To build its research excellence upon access to the very best telescope and supercomputer facilities.
- To make the expertise, knowledge and discoveries within the Centre available worldwide through innovative teaching.
- To excite and inform the public about the wonders of the universe through the production and global distribution of 3D astronomy movies.

- To embrace the University's 2025 vision of Swinburne as a University of Technology with strong research, industry engagement and social inclusion.
- To provide a diverse and supportive environment in which all staff and students can realize their research ambitions with a sustainable work/life balance.

The Director is responsible for strategically managing all aspects of the Centre's operations and development and is a 100% leadership and research position. The Director is required to strengthen and/or complement the research areas in the Centre and operate in synergy with the Faculty and the University. It is expected that the Director will generate high quality research output and attract significant external research funding. It is also expected that the Director will make a contribution to the mentoring of junior researchers and attract and supervise relevant higher degree candidates. The core research programs of the Centre are currently:

1. Understanding the origin and evolution of galaxies and the intergalactic medium
2. Understanding the fundamental physics and cosmology of the Universe
3. Gravitational Wave astronomy, via the co-located headquarters of the ARC Centre of Excellence, OzGrav.
4. Developing new observational and computational techniques to study the universe

It is expected that the Director will contribute significantly to these research areas, or bring a significant new dimension to the Centre's research, by their personal research.

The Centre is located in the School of Science, which is part of the Faculty of Science, Engineering and Technology (FSET). The Director reports directly to the Pro Vice-Chancellor of FSET, and because the Centre receives significant amounts of funding from Swinburne Research also reports on this to the Deputy Vice-Chancellor for Research & Development.

Key Responsibility Areas

Research Leadership	▪ Manage all aspects of the Centre's research strategy and operations ▪ Promote innovation and excellence in research and achievement of the Centre's strategic vision and mission statement. ▪ Develop strategies to drive high quality Centre performance in publications, research translation, research funding and student outcomes. ▪ Maintain a world-leading personal program of research. ▪ Build and strengthen strategic alliances, funding opportunities and partnerships with industry, government, educational and research institutions and the community. ▪ Foster the research of other groups and individuals within the Centre and other comparable organisational units within related disciplines.

Academic leadership	▪ Support the Faculty leadership in the development and implementation of an effective planning and management framework for engagement across the Faculty, including setting academic priorities and performance reporting. ▪ Provide outstanding academic leadership and foster excellence in research, teaching and policy development within the University and the wider community. ▪ Mentor and/or arrange mentoring for less experienced researchers in the Centre. ▪ Support the chair of the Department of Physics and Astronomy in course development and teaching initiatives.
Financial Management	▪ Manage and understand operational plans and budgets in consultation with the work team and in accordance with University, Faculty and Centre guidelines in order to achieve Centre goals. ▪ In consultation with the Faculty leadership, plan the financial, human and physical resource management activities of the Centre. ▪ Report on research, budgets and operations as required.
Human Resource Management	▪ Manage Centre staff to achieve the strategic objectives of the Centre, Faculty and University. ▪ Set and monitor objectives for self and participating staff through the University staff performance and development process. ▪ Supervision and career development of research-support and administrative staff.
Swinburne Behaviors	Commitment to the Swinburne Behaviors of: ▪ Communicate – Say it – have the conversation, respect each others' differences, give meaningful feedback and share honestly and openly ▪ Listen and Learn – Hear it, learn from it – learn from one another, actively listen to each other, resolve conflict and be innovative ▪ Collaborate – Share it – work constructively together with a common purpose to achieve the university's goals ▪ Trust – Trust it – be open to and with others, act with fairness and respect, inspire positive expectations and communicate effectively ▪ Act – Do it – have a strong sense of immediacy, take practical action and see it through
Other	▪ Undertake Division-wide and/or university-wide responsibilities as required.

Key Selection Criteria

Candidates are required to respond to each of the selection criteria.		Essential / preferable
Qualifications	· A gained PhD or other equivalent doctoral qualification.	Essential

Experience/ Knowledge/Attributes	· A leading international research record in astrophysics.	Essential
	· Demonstrated experience and ability to exercise initiative and academic leadership in research.	Essential
	· Track record of successful generation of research income from external agencies, government or industry.	Essential
	· Demonstrated financial management skills including the ability to contribute to and/or manage discipline and/or research project budgets.	Essential
	· A track record of successful supervision of higher research degree candidates, particularly supervision to completion.	Essential
	· Demonstrated leadership in equity and diversity with a commitment to achieving work-life balance in teams.	Essential
	· A record of achievement in managing a small organisation or division of a larger organisation.	Preferable
	· Demonstrated ability to develop and maintain links with business, community and industry.	Preferable
	· Significant record of leadership or advice in national and international science policy development.	Preferable
	· The ability to foster interdisciplinary/disciplinary research areas such as data science, optical science or space science.	Preferable
·	· Substantial experience and expertise in University teaching including a record of co-ordination, teaching and curriculum development. In particular, demonstrated ability to teach courses in one of the following areas, astronomy, astrophysics, and or computational science.	· Preferable
· Other	· A valid Working with Children Check must be obtained before an appointment is confirmed.	· Essential