THE UNIVERSITY OF WESTERN AUSTRALIA

POSITION DESCRIPTION

Position Title	Senior Research Fellow (Astrophotonics)
Classification	Level C
School/Division	Office of the Deputy Vice Chancellor (Research)
Centre/Section	International Centre for Radio Astronomy Research (ICRAR)
Supervisor Title	Principal Research Fellow
Supervisor Position Number	318215
Position Number	

Your work area

ICRAR is a WA State funded high profile equal joint venture established in 2009 between Curtin University and The University of Western Australia (UWA). The Centre's headquarters are located at UWA, with research nodes at both UWA and Curtin. ICRAR is one of the lead Australian organisations participating in the international Square Kilometre Array (SKA) Project and is one of the largest astronomy organisations in Australia.

The Astrophotonics Group at ICRAR is focused on designing, building, and testing advanced photonic systems with applications in radio astronomy, optical astronomy, and space science. The group combines research expertise from people with a broad range of backgrounds including astronomy, physics, and engineering. The group's core technological capability is the long-distance transfer of stabilised optical-frequency signals, microwave-frequency signals, timing signals and communications signals, transmitted across optical fibre networks and free-space laser links.

Your work will contribute to all aspects of Astrophotonics research group at ICRAR including the Radio Astronomy Instrumentation, Terrestrial Laser Links, Space Laser Links, and Quantum Technologies project areas.

Reporting structure

Reports to: Principal Research Fellow

Your role

As the appointee you will, under broad direction undertake research relating to all aspects of the Astrophotonics research group. This includes contributing towards radio astronomy instrumentation, terrestrial laser links, space laser links, and quantum technologies. You will be expected to work with the Principal Research Fellow to mentor other Astrophotonics staff and supervise Masters and PhD students. You will be responsible for reporting, documentation, and leadership of research activities with the Astrophotonics research group.

Your key responsibilities

Lead research and development across several of the Astrophotonics research group project areas

Contribute technical expertise across all aspects of Astrophotonics research group

Provide input to written reports for partners, stakeholders, and funding agencies, as required by the Principal Research Fellow

Assist the Principal Research Fellow with research leadership and strategic direction of the Astrophotonics research group, including grant writing

Establish and maintain effective working relationships with our other project personnel, including those within project partners and other collaborating organisations

Contributes to research outcomes within discipline or area of expertise

Publish scientific research in refereed international journals

Present research at national and international scientific conferences

Supervision Masters and PhD students

Mentor other Astrophotonics staff

Attend and contribute to relevant meetings

Other duties as directed

Service and engagement

Participation in education/research leadership in public engagements, government and industry including involvement in an innovation beyond academia

Work within the legislative requirements of the University and support the University's commitment to inclusion and diversity

Represent the University of Western Australia through involvement in professional associations, conferences, non-academic (e.g. government, not-for-profit, industry) partnerships, and other external activities

Participation in the Universities social impact studies

Your specific work capabilities (selection criteria)

Qualifications and / or certifications

PhD in an academic field relevant to the discipline or other appropriate higher professional qualifications

Research

Experience in several of the following technical areas:

- radio astronomy instrumentation
- free-space optics, optical fibre coupling, and optical system design
- experimental frequency or quantum metrology
- classical and coherent optical communications systems
- quantum technologies and quantum communications

Experience with supervision of junior research staff

Experience with supervision of Masters and PhD students

Experience with systems engineering processes and documentation

Highly developed organisational skills with the demonstrated ability to set priorities and to meet deadlines

Excellent verbal and written communication skills

Proficiency in a range of computing skills including word processing, spreadsheets, databases, internet and email

Ability to work independently, show initiative, problem solve and work productively as part of a team

Service and Engagement

Demonstrable experience of leading public engagement activities that promote research and/or education outcomes, government and industry

Demonstrated ability to relate well to staff and students at all levels and evidence of a commitment to equity and diversity principles

Undertake administrative duties as required in relation to the above research supervision.

Perform other duties as directed by the Head of School and the Discipline Chair.

Special requirements (selection criteria)

Occasional travel within the state will be required for field deployments

Occasional domestic and international travel may be required

Some after-hours work will be required to attend meetings across time zones

Compliance

Please ensure you are aware of and comply with legislation and University policy relevant to the prescribed duties, including:

The University's Code of Conduct hr.uwa.edu.au/policies/policies/conduct/code/conduct

Inclusion and Diversity web.uwa.edu.au/inclusion-diversity

Safety, health and wellbeing safety.uwa.edu.au/