



Position Title:	Research Associate
Position Classification:	Level A
Position Number:	NEW
Faculty/Office:	Engineering and Mathematical Sciences
School/Division:	Physics, Mathematics and Computer Science
Centre/Section:	International Centre for Radio Astronomy Research (ICRAR)
Supervisor Title:	Senior Research Fellow
Supervisor Position Number:	313695

Your work area

ICRAR is a Western Australian State funded high profile equal joint venture established in 2009 between Curtin University and The University of Western Australia (UWA). The Centre's headquarters is 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. ICRAR has been further funded from 2019 to 2024 with \$25 Million by the WA State Government and equal contribution from the Joint Venture Universities. ICRAR is one of the largest astronomy organisations in Australia.

Reporting Structure

Reports to: Senior Research Fellow

Your role

As the appointee, you will undertake research in galaxy evolution in dense environments. This position at the UWA node of ICRAR will lead numerical simulations of galaxies in groups/clusters of galaxies as part of a collaborative project with Swinburne University and the University of Queensland (UQ). You will perform cosmological and/or constrained simulations of galaxy formation and evolution and analyse the simulated galaxy properties with machine learning techniques to uncover details on the environment-driven galaxy evolution. This position at UWA/ICRAR headquarters will work under the supervision of Senior Research Fellow, Professor Kenji Bekki.

This collaborative project is motivated by recent significant advances in research on photometric, spectroscopic, and morphological evolution of galaxies in clusters of galaxies (in particular, Fornax).

Your key responsibilities

Performance of computer simulations of galaxy formation and evolution in clusters

Analysis of the simulated galaxies with machine learning algorithms

Comparison between the latest observations with simulations

Active collaboration with the observational PDRA at Swinburne University and UQ

World-class scientific research and regular publication in refereed international journals

Contribution to the supervision of undergraduate and postgraduate research students

Other duties as directed.

Your specific work capabilities (selection criteria)

PhD in astrophysics

Expertise in computational astrophysics (HPC skills or similar)

Ability to interact and collaborate with observational researchers

Reliability and effectiveness in distributed scientific collaborations

Strong publication record evidenced by refereed publications

Excellent verbal and written communication skills

Ability to work productively with students and/or contribute to outreach programmes

Compliance

Workplace Health and Safety

All supervising staff are required to undertake effective measures to ensure compliance with the Occupational Safety and Health Act 1984 and related University requirements (including Safety, Health and Wellbeing Objectives and Targets).

All staff must comply with requirements of the Occupational Safety and Health Act and all reasonable directives given in relation to health and safety at work, to ensure compliance with University and Legislative health and safety requirements.

Details of the safety obligations can be accessed at <http://www.safety.uwa.edu.au>

Equity and Diversity

All staff members are required to comply with the University's Code of Ethics and Code of Conduct and Equity and Diversity principles. Details of the University policies on these can be accessed at http://www.hr.uwa.edu.au/publications/code_of_ethics, <http://www.equity.uwa.edu.au>