

# Research Associate/Fellow



Curtin University

SCHOOL/AREA	Curtin Institute of Radio Astronomy (R1AY0)		
FACULTY	Faculty of Science and Engineering		
LINE MANAGER	Dr Jean-Pierre Macquart		
ROLE STATEMENT			
The University has generic role statements for categories and levels of academic positions. Attached is the role statement applicable to this position. The role statement outlines the accountabilities and responsibilities expected of an academic appointed to this category and level and includes the selection criteria for appointment. For specific details regarding the position please refer to the Position Overview, below.			
POSITION OVERVIEW			
The Curtin Institute of Radio Astronomy is seeking a Research Fellow to work on the localisation of Fast Radio Bursts (FRBs) with the ASKAP survey for fast transients, CRAFT. The research fellow will be involved in the interpretation of FRB dispersion measures and redshifts to determine the intergalactic baryon density and the effect of galaxy feedback on the IGM, and in developing models of the intergalactic baryon distribution. The research fellow will also contribute to the analysis of the properties of FRB host galaxies.			
The role involves the detection and localisation of FRBs in high time resolution data, and should expect to be involved in most aspects of the data pipeline, from observations to data processing to statistical analysis, and will work with Macquart and other members of the CRAFT team (especially Ryan Shannon at Swinburne and Keith Bannister at CASS). The successful applicant will also be expected to augment the scientific return from CRAFT by interacting with other Curtin University staff and CRAFT members in the interpretation of survey results and in the pursuit of multi-messenger follow-up of FRB detections.			
This three year position will be based at the Curtin Institute of Radio Astronomy (CIRA), located on the Bentley Campus of Curtin University. The position will involve liaising with collaborators at CSIRO Astronomy and Space Sciences (CASS) and at Swinburne University, and may involve regular travel between these institutes.			
Previous experience in radio interferometry is highly desirable, and experience in high-time resolution data processing or pulsar astronomy is desirable. The candidate must possess an excellent track record, with potential for attracting competitive grant funding. A doctoral qualification in a relevant discipline is essential.			
ORGANISATIONAL UNIT DIMENSIONS			
The Curtin Institute of Radio Astronomy (CIRA) comprises more than 50 staff and PhD students, primarily focused on radio astronomy research, but also spanning many other aspects of observational astronomy, radio astronomy engineering, applications of high performance computing in astronomy and astrophysics theory (including simulation).			
CIRA comprises one half of the International Centre for Radio Astronomy Research (ICRAR) Joint Venture with The University of Western Australia, as well as being a node of the ARC Centre of Excellence for All-sky Astrophysics (CAASTRO). CIRA researchers maintain excellent linkages with these and other national and international groups, and, in addition CIRA has excellent access to the \$80M Pawsey Supercomputing Centre.			
CIRA is at the forefront of low frequency radio astronomy research as the manager and operator of the Murchison Widefield Array (MWA) ( <a href="http://www.mwatelescope.org">www.mwatelescope.org</a> ) The MWA is an SKA precursor facility; it is fully operational, undertaking a number of important science programs spanning Galactic and extragalactic radio astronomy, pulsars, transients, the epoch of reionisation, solar and ionospheric physics, as well as radio astronomy engineering. The results of these programs also contribute to the design process for SKA_LOW ( <a href="http://www.skatelescope.org">www.skatelescope.org</a> ).			
CIRA has an active and successful research group in the area of fast transients, with strong links to both domestic and international teams working in this field. The Research Fellow will join this high-profile research group at CIRA, contributing to and helping to direct its research activities, and supervising undergraduate and postgraduate students.			
For more information on CIRA: <a href="http://astronomy.curtin.edu.au">http://astronomy.curtin.edu.au</a> & <a href="http://www.icrar.org">http://www.icrar.org</a>			
KEY PEOPLE INTERACTIONS			
<ul style="list-style-type: none"><li>• Dr Jean-Pierre Macquart</li><li>• Dr Ramesh Bhat</li></ul>		<ul style="list-style-type: none"><li>• Dr Clancy James</li><li>• Ryan Shannon (CSIRO)</li></ul>	
WORK REQUIREMENTS			
<ul style="list-style-type: none"><li>• Interstate and/or overseas travel may be required.</li></ul>			

 <b>Curtin University</b>	<b>Academic Role Statement</b>
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<b>Title:</b>	Research Associate		
<b>Work Function:</b>	Research Only	<b>Category:</b>	Research Academic (RA)
<b>Level</b>	ALA		
<b>Date last updated:</b>	September 2016		

## 1. Purpose of Position

This role contributes primarily to research based activities, either independently or as part of research team.

The incumbent is expected to work with the support and guidance of more senior staff and to develop a research program and deliver research outputs with increasing degrees of autonomy.

## 2. Accountabilities and Responsibilities may include:

### Research

- Contribute to research output, normally as part of a research group.
- Participate in applications for competitive funding.
- Disseminate research findings through seminars, workshops and conferences
- Publish/exhibit in high quality journals/outlets (often in collaboration with colleagues) in manner consistent with disciplinary practice.
- Undertake principal supervision of honours and research masters, and cosupervision of research doctoral supervision where appropriate.
- Undertake administrative functions associated with research activities.

### Teaching

- Participate in the delivery of research led educational programs as required by the Head of School.

### Service

- Contribute to academic service and leadership, engagement and management within the University
- Contribute to external activities relevant to the discipline/profession and community engagement.
- Foster and promote relationships with professional bodies, industry and affiliated associations, government departments, and the wider community.

### Other

- Undertake other activities associated with the organizational area, which the incumbent might reasonably be expected to do, and which are consistent with the specific accountabilities and responsibilities outlined above.
- Engage in appropriate professional development and mentoring programs.

- Model a high standard of professional behaviour consistent with the University Code of Conduct and Vision, Mission and Values.

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### 3. Compliance and Legislative Requirements

#### Occupational Safety and Health

All supervising staff are required to undertake effective health and safety measures to ensure compliance with the Occupational Safety and Health Act 1984 and related legislative requirements.

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.

#### Ethics Equity and Social Justice

All staff are responsible for informing themselves of their obligations and responsibilities in relation to Ethics, Equity and Social Justice. In particular, all staff must demonstrate appropriate and professional workplace behaviours in accordance with the University's Values and Code of Conduct.

**Staff must familiarise themselves and comply with all other University policies and procedures and legislation relevant to the position.**

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### 4. Selection Criteria

***Applicants are not required to address each element of the selection criteria, but should provide sufficient information in their application to enable the selection panel to make an informed assessment of their suitability for the role.***

***Applicants need to consider Curtin's Values and how they apply to the advertised position. Curtin is looking for a demonstrated commitment in their professional and/or personal life to the Values of Curtin which are:***

- ***Integrity – to act ethically, honestly and with fairness***
- ***Respect – to listen, value and acknowledge***
- ***Courage – to lead, take responsibility and question***
- ***Excellence – to strive for excellence and distinction***
- ***Impact – to empower, enable and inspire***

#### Essential

1. Progress towards a doctoral qualification in relevant discipline.
2. Demonstrated relevant subject/discipline knowledge and knowledge and experience in relevant research techniques.
3. Demonstrated competency in a range of qualitative and quantitative research tasks.
4. Emerging research track record/potential to conduct quality research and contribute productively to research teams under supervision.
5. Demonstrated high level organisational skills.
6. Demonstrated high level communication and interpersonal skills with a commitment to the development of a collegial and supportive working environment and the ability to interact with students and staff with cross cultural sensitivity.
7. Demonstrated commitment to applying relevant and applicable policies, procedures and legislation in the day-to-day performance of the functions of this position.

## Desirable

1. A doctoral qualification in relevant discipline.
2. Experience of working collaboratively with industry and community engagement.
3. Commitment to quality teaching at undergraduate and postgraduate level.

## 5. Capabilities and Behaviours (Curtin Leadership Framework)

It is a requirement that staff in leadership roles exhibit and model capabilities and behaviours consistent with the Curtin Leadership Framework (see [http://odu.curtin.edu.au/curtin\\_leadership\\_framework.cfm](http://odu.curtin.edu.au/curtin_leadership_framework.cfm) ). These include:

Managing Self	Leading Others	Leading Innovation & Change	Leading Strategically	Managing Operations
Understanding self & others	Building & leading high performance teams	Thinking creatively & fostering innovation	Thinking strategically & having vision	Managing Curtin resources
Modelling Curtin Values	Developing staff capability	Managing change	Setting goals & objectives	Continuous quality improvement
Managing time and wellbeing	Facilitating participative decision making	Influencing and inspiring others	Thinking analytically to solve problems	Managing complex projects
Building working relationships	Dealing with conflict			
Effective Communication				

 <b>Curtin University</b>	<b>Academic Role Statement</b>
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<b>Title:</b>	Research Fellow		
<b>Work Function:</b>	Research Only	<b>Category:</b>	Research Academic (RA)
<b>Level</b>	ALB		
<b>Date last updated:</b>	September 2016		

## 1. Purpose of Position

This role contributes primarily to research based activities, conducting nationally competitive research, either independently or as part of research team, as well providing a significant contribution to service and leadership. Limited teaching may also be undertaken as part of the role.

The incumbent is expected to have a growing profile in research and service/leadership. They are likely to coordinate or lead the work of other staff.

## 2. Accountabilities and Responsibilities may include:

### Leadership & Service

- Contribute to the development of a collegial and supportive working environment.
- Contribute to academic service and leadership, engagement and management within the University
- Provide leadership and foster and promote relationships with professional bodies, industry and affiliated associations, government departments, and the wider community.
- Participate in professional body and other external activities as required.
- Model a high standard of professional behavior consistent with the University Code of Conduct and Vision, Mission and Values.

### Research

- Undertake nationally competitive and high quality research in discipline/field.
- Develop a coherent program of research (to be agreed through WPPR process).
- Participate in and act as co or chief investigator in applications for competitive funding.
- Disseminate research findings through seminars, workshops and conferences
- Publish/exhibit in high quality refereed journals/outlets in manner consistent with disciplinary practice.
- Provide effective supervision of research honours, research masters, and research doctoral students.
- Aspire to be recognized nationally for research in the field.
- Undertake administrative functions associated with research activities.

### Teaching

- Participate in the delivery of research led educational programs as required by the Head of School.

## Other

- Undertake other activities associated with the organizational area, which the incumbent might reasonably be expected to do, and which are consistent with the specific accountabilities and responsibilities outlined above.
  - Engage in appropriate professional development and mentoring programs.
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## 3. Compliancy and Legislative Requirements

### Occupational Safety and Health

All supervising staff are required to undertake effective health and safety measures to ensure compliance with the Occupational Safety and Health Act 1984 and related legislative requirements.

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### Essential

1. A doctoral qualification in relevant discipline.
2. Evidence of a record of research outputs/creative works in high quality refereed journals/outlets consistent with the discipline.
3. Evidence of quality and impact of research outputs/creative works including journal ranking, citation indices, patents awarded, reputation and standing of publishing house or other outlets, independent review from distinguished scholars or critics, or equivalent esteem measures as appropriate to the discipline.

4. Demonstrated high level communication and interpersonal skills with a commitment to the development of a collegial and supportive working environment and the ability to interact with students and staff with cross cultural sensitivity.
5. Demonstrated commitment to applying relevant and applicable policies, procedures and legislation in the day-to-day performance of the functions of this position.

### **Desirable**

1. Commitment to quality teaching at undergraduate and postgraduate level.
2. Demonstrated ability to supervise HDR students
3. A history of successful competitive grant applications.

## **5. Capabilities and Behaviours (Curtin Leadership Framework)**

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