



Position Details

Research Projects- CSOF6

THE FOLLOWING INFORMATION IS FOR APPLICANTS

Advertised Job Title	Senior Electronics/ Electrical Engineering Lead
Job Reference	101684
Tenure and work schedule	Indefinite, full time or part-time (minimum of 0.8 FTE) 5-day work week typically between 8am to 4pm, onsite
Salary Range	AU\$135k - AU\$158k per annum (pro-rata for part-time) plus 15.4% superannuation, and a location allowance of \$1868 per year due to remote location
Location(s)	Narrabri, NSW (Gomeroi Narrabri Country) Onsite role with flexible start and finish times considered; transport between Narrabri and the Paul Wild Observatory site is provided
Relocation Assistance	Will be provided to the successful candidate if required
Applications are open to	Australian/New Zealand Citizens and Australian Permanent Residents
Position reports to the	Team Leader – East Coast Observatories
Client Focus – Internal	95%
Client Focus – External	5%
Number of Direct Reports	Up to 6
Enquire about this job	Peter Mirtschin via email at peter.mirtschin@csiro.au or phone +61 2 6790 4058
Support and workplace adjustments	We offer a range of reasonable supports and workplace adjustments. Please let us know via email at careers.online@csiro.au if we can help you to equitably participate in our recruitment process or the role itself.
How to apply	Apply online at https://jobs.csiro.au/ Internal applicants please apply via Jobs Central If you experience difficulties when applying, please email careers.online@csiro.au

Acknowledgement of Country

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View our [vision towards reconciliation](#).

Diversity, inclusions & belonging

At CSIRO, diversity, equity, and inclusion are central to our purpose and impact. We value diverse perspectives, which drive innovation and help us address complex challenges.

Inclusion is key to our culture, ensuring everyone feels supported and empowered to contribute their best work. We recognise the intersectionality of experiences, identities, and social factors that shape each individual. By embracing diversity, we learn from the uniqueness of our people, creating a culture where all belong. CSIRO is an equal opportunity employer, recruiting based on merit and reflecting the community we serve. We value diversity in all its forms, including age, nationality, ability, culture, gender, sexuality, faith, education, and thought.

About CSIRO



Who we are

Australia's national science agency



One of the world's largest multidisciplinary science and technology organisations



6,300+ dedicated people working across 51 sites in Australia and globally



State-of-the-art national research infrastructure



We delivered \$10.2 billion of benefit to the nation

CSIRO (Commonwealth Scientific and Industrial Research Organisation) is Australia's national science agency and innovation catalyst and one of the world's largest and most successful publicly funded research and development organisations.

CSIRO is one of the largest and most multidisciplinary mission-driven research agencies in the world. With 51 locations and over 6,300 people across Australia and internationally, CSIRO solves the greatest challenges through innovative science and technology to deliver world-class economic, environmental, and social benefits for Australia in a global context.

Many of CSIRO's innovations were once considered impossible. Fast WiFi, Aerogard insect repellent and the plastic Australian banknote, to name a few.

Until someone, just like you, joined us and took on the challenge.

We are committed to developing and supporting a diverse workforce in its broadest sense and know diverse teams are more effective and deliver more innovative outcomes for science.

As an employee of CSIRO, you will be eligible for the many benefits of working at Australia's National Science Agency. You can read more here:

- [Life at CSIRO](#)
- [Personal development and learning](#)
- [Generous leave conditions and benefits](#)
- [Work / life balance](#)



About the Australia Telescope National Facility

CSIRO operates several radio astronomy observatories and data archives that are collectively known as the Australia Telescope National Facility (ATNF). Our technology development program is the cornerstone of the ATNF and is an internationally recognised source of innovative radio astronomy instrumentation, which leads to societal impact.

The ATNF includes:

- the ASKAP radio telescope with its wide field-of-view in a legislated radio quiet zone,
- the Australia Telescope Compact Array with its wide frequency coverage, quick response times and flexible configurations,
- Murriyang, our Parkes radio telescope, which is the largest single-dish radio telescope dedicated to science observations in the southern hemisphere,
- the Long Baseline Array (LBA) providing very long baseline interferometry across Australia,
- the Mopra radio telescope, which is used for single-dish observations, particularly at millimetre wavelengths and as part of the LBA
- astronomical data archives that currently provide 15PB of data, as well as various catalogues, databases and software packages used for obtaining and processing data from our facilities, and
- a comprehensive range of expertise, spanning from the intricacies of front-end receivers to deploying machine learning algorithms for analysing the vast data volumes contained within our archives.

Visit [Australia Telescope National Facility - CSIRO](#) for more information. For two semesters each year, the ATNF accepts Principal Investigator-driven proposals from the national and international community.

The ATNF has been involved with the international SKA project from its inception, has contributed to its design, and is delivering the beam-forming instrumentation and local infrastructure for the SKA-Low telescope in Australia. In Australia, CSIRO is partnering with the SKA Observatory to build and operate the SKA-Low telescope. The ATNF's locations, telescopes and engineering expertise are in an excellent position to support and extend the science goals of the SKA telescopes over the next decade.

The ATNF forms part of CSIRO's Space & Astronomy research unit, and together we aim to enable humanity to understand our Earth and Universe. This understanding, and our innovative science and technology, contributes to solving the greatest challenges, building future industry, and serving customers from across Australia and the world.



About the Australia Telescope Compact Array

The Australia Telescope Compact Array (ATCA), located 25 km west of the town of Narrabri in rural NSW (about 500 km north-west of Sydney), is used by astronomers to study the structure and evolution of our Universe. The ATCA at the Paul Wild Observatory, is an array of six 22-m high-performance dish antennas with receiver systems spanning 1.1 GHz to 105 GHz. A series of major overhauls, commencing in 2023, upgraded the telescope's entire data processing system, in a multi-million-dollar project, BIGCAT, as well as modernising support infrastructure. The Observatory will also host the first of a series of low-frequency (50-350MHz) clusters as part of a future long-baseline array.

Five of the Compact Array's six dishes sit on a three-kilometre stretch of wide-gauge rail track, with the sixth antenna located three kilometres further west. The antennas remain stationary during observations, and is moved to different locations every few weeks to meet radio astronomy needs. The Compact Array is one of the most advanced telescopes of its type and among the top three telescopes of its kind by both publication numbers and citations. Visit [Paul Wild Observatory Visitors Centre - CSIRO](#) for more information.

Role Overview

The role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work. At senior levels, Research Projects staff may be involved in providing consulting services, science and technology management and/or industry liaison.

We are seeking a full time, highly motivated and enthusiastic electronics, electrical or radio frequency engineer to be part of the ATNF Operations Program to support Observatory Operations at the Paul Wild Observatory at Narrabri. You will contribute your own highly practical engineering skills and lead a small multi-disciplinary engineering team to plan and conduct the routine maintenance and repairs to observatory instrumentation including cryogenically cooled low-noise receivers, digital signal processing, control and monitoring, and timing systems. You will be responsible for ensuring that high levels of system reliability and performance are maintained while providing a safe and efficient work environment for your team.

While leading a small team at Narrabri, you will work at times within the broader ATNF technical team including at our Marsfield Headquarters to maintain operations and to participate actively in the planning and delivery of major new state-of-the-art instrumentation projects such as BIGCAT. Opportunities will exist for you to provide expertise and assist in the coordination of resources to provide support to ATNF Observatories in NSW and WA.

This is an opportunity to combine the advantages of a rural lifestyle with a role that presents unique professional challenges at a world-class science and technology research facility.

Duties and key result areas

- Lead a technically diverse engineering team to maintain the highest levels of reliability of the Australia Telescope Compact Array (ATCA), including electronic, electrical, mechanical, cryogenic and radio frequency systems.
- Use your specialised engineering skills to actively contribute to the maintenance and operations of systems and equipment, sharing your knowledge and skills with other staff.
- Ensure efficient planning and implementation of routine maintenance, operational activities and upgrade of Observatory systems.
- Work closely with ATNF staff at other sites, including at Marsfield, in the design, construction and deployment of new instrumentation and upgrades.
- Participate in the Observatory on-call roster to attend to after-hours breakdowns, working flexible hours if required, and travel to other sites to assist with installation and maintenance activities.
- Maintain a safe, effective and efficient work team, allocate and manage resources and undertake effective and proactive staff performance management.
- Communicate effectively and respectfully with staff, contractors and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO's reputation.
- Work collaboratively as part of a multi-disciplinary, regionally dispersed research team to carry out tasks in support of CSIRO's scientific objectives.
- Adhere to CSIRO's Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
- Other duties as directed.

Selection criteria

Essential

1. A degree in electronic or electrical engineering (or similar) with eligibility for Graduate Membership of the Institute of Engineers (Australia) or equivalent professional body.
2. A valid current Class 'C' Australian driver's licence.
3. An ability to perform work at heights.
4. Demonstrated in-depth relevant professional engineering experience with the operation, maintenance and modification of electronic/electrical systems, equipment, automated systems and plant.
5. A sound understanding of a broad range of system engineering principles, which can include digital and analogue electronics, radio frequency systems, servo systems and electrical and mechanical systems.
6. Excellent hands-on technical and problem solving skills in complex systems.
7. Proven effectiveness in applying independent professional engineering judgement while maintaining and operating systems and equipment in an operational environment.
8. Demonstrated leadership experience of diverse work teams in an operational environment, including a willingness to openly share technical knowledge.
9. Proven experience developing safety documentation, such as activity-based risk assessments, and a commitment to safe work practices, environmental sustainability and the principles of equity and diversity.

Desirable

1. Previous experience in the engineering maintenance of an operational facility with complex engineering requirements.
2. Previous experience with fault finding and repairing RF and electronic modules to the component level
3. A demonstrated understanding of radio-frequency techniques.

Not sure if you meet all the criteria?

Don't let that stop you from applying. We recognise there are many pathways to developing skills and experience, and we can consider appointing at different levels depending on what you bring. If you have more experience and capability than outlined, the role may be upgraded to a higher level; likewise, if you are still developing in some areas, we may be able to offer the role at a lower level. If you'd like to discuss whether this opportunity could be the right fit, please contact the person listed on page 1.

Required Competencies

- **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other team as well as industry colleagues.

- **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious, proposals / ideas.
- **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
- **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
- **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
- **Adaptability:** Demonstrates flexibility in thinking and adapts to and manages the increasing rate of organisational change by adjusting strategies, goals and priorities.

Setting you up for success

We understand that not everyone works in the same way and sometimes people may require reasonable support and adjustments to perform at their best. Whether related to the recruitment process and or the role itself, this may include options such as providing different methods of communication, flexible hours or physical adjustments to work methods. If you feel comfortable, we encourage you to share any support and adjustments you may need to carry out the inherent requirements of the role. Please reach out to the careers.online@csiro.au if we can help you to equitably participate in our recruitment process or the role itself.

CSIRO values

CSIRO is a values-based organisation committed to values-based leadership.

Value	Descriptor	Behaviour
People first	Our priority is the safety and wellbeing of our people. We believe in, and respect, the power of diverse perspectives. We seek out and learn from our differences.	• Respectful • Caring • Inclusive
Further together	We achieve more together than we ever could alone. We listen and collaborate, in teams, across disciplines, across boundaries. We embrace ambiguity and use discussion and persistence to generate unique solutions to complex problems.	• Accountable • Authentic • Courageous

Making it real	We do science with real impact. We thrive when taking on the big challenges facing the world. We take educated risks and defy convention. We celebrate successes and failures and leverage them to learn as we strive to be the force for positive change.	• Partnering • Cooperative • Humble
Trusted	We're driven by purpose but remain objective. We fight misinformation with facts. We earn trust everywhere through everything we do. We trust each other and we hold each other accountable. Together our actions drive Australia's trust in CSIRO.	• Curious • Adaptive • Entrepreneurial

Child safety

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](#).

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

- The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
- Following initial system familiarisation, you will be required to participate in the Observatory on-call roster to attend to after-hours breakdowns, and to work flexible hours as required.