



Position Details

Research Projects – CSOF5

THE FOLLOWING INFORMATION IS FOR APPLICANTS	
Advertised Job Title	Software Engineer (Assembly, Integration and Verification)
Job Reference	98389
Tenure	Indefinite – Full-Time or Part-Time
Salary Range	AU\$114,219 - \$123,605 a (pro-rata for part-time) + 15.4% superannuation
Location(s)	Perth, Western Australia
Relocation Assistance	Domestic relocation will be provided to the successful candidate if required
Applications are open to	Australian/New Zealand Citizens and Australian Permanent Residents Only
Position reports to the	This position reports to the CSIRO AIV Team Leader
Client Focus – Internal	50%
Client Focus – External	50%
Number of Direct Reports	0
Enquire about this job	To enquire about this position, please contact Steve Negus via email at steve.negus@csiro.au
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 or call 1300 984 220.

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](#).

Background

The SKA Observatory (SKAO) is a next-generation radio astronomy facility that will revolutionise our understanding of the Universe and the laws of fundamental physics. Enabled by cutting-edge technology, it promises to have a major impact on society, in science and beyond.

The SKAO has an international footprint and consists of the SKAO Global Headquarters in the UK, the SKAO's two telescopes at radio-quiet sites in South Africa and Australia, and associated facilities to support the operations of the telescopes.

In Australia, the SKAO is collaborating with CSIRO to operate and support the construction of the low frequency telescope (SKA-Low) in remote Western Australia on Wajarri Yamaji Country.

CSIRO is responsible for land management, subleases, maintaining radio quiet protections, provision of services to the telescopes, and managing the Indigenous Land Use Agreement.

The Traditional Owners and native title holders, the Wajarri Yamaji, have gifted CSIRO with the traditional name Inyarrimanha Ilgari Bundara for the CSIRO Murchison Radio-astronomy Observatory, home to the SKA-Low telescope. The traditional name means 'sharing sky and stars' in the Wajarri language.

Role Overview

The CSIRO Assembly, Integration and Verification (AIV) team is integrating the complex digital and RF electronic systems into the SKA LOW Telescope Signal Chain and then verifying the Telescope to defined Level 1 requirements. The Software Engineer will join the team, specifically providing software support services to the Square Kilometre Array Observatory (SKAO) for the SKA-Low telescope. This will entail the integration and verification of distributed software systems and the relevant hardware and include deployment onto high performance computing (HPC) platforms and integrating data processing workflows.

On completion of construction, the role will join SKAO Operations.

This role entails working in an agile team environment distributed across the world and requires working with others in different time zones. CSIRO has a flexible work policy to accommodate this. Also, occasional domestic and international travel may be required to support and attend planning and testing events.

Duties and Key Result Areas

- Proactively identify, investigate, and solve complex problems spanning multiple software and hardware components.
- Integrate control and data processing software components in a self-managed Kubernetes environment spanning off-the-shelf and custom hardware.
- Design and implement system-level tests for integration and verification of the telescope.
- Assist science and commissioning teams to operate the telescope during the construction phase.
- Develop control and/or data processing software for test environment and telescope components in Python.
- Communicate openly, effectively, and respectfully with all staff, clients and suppliers, and form quality interpersonal relationships that reflect CSIRO's values and reputation.

- Follow the spirit and practice of CSIRO's Code of Conduct, Health, Safety and Environment procedures and policy, Diversity initiatives and Making Safety Personal goals.
- Perform other related tasks as requested.

Selection Criteria

Essential

Under CSIRO policy only those who meet all essential criteria can be appointed.

- A bachelor's or master's degree relevant to software engineering, or equivalent work experience.
- At least 3 years' experience in Python development in a collaborative environment
- Experience in developing and supporting distributed, multi-core data processing software running in Cloud, Scientific Computing or High-Performance Computing (HPC) platforms.
- Experience of deploying and operating applications in a Linux environment

Desirable:

- Experience with Kubernetes or other container orchestration systems
- Experience developing Scientific Computing Software.
- Knowledge of real-time streaming or batch data processing pipelines.
- Interest in astronomy

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 teams as well as industry colleagues.
- **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for other's reactions.
- **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:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
- **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
- **Adaptability:** Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside one's own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

Special Requirements

Appointment to this role may be subject to conditions including: The successful candidate will be

- asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
- required to undertake a pre-employment medical examination prior to commencement.
- required to work flexible hours when required.
- required to travel locally, nationally, and occasionally internationally.
- required to hold an Australian C class drivers' licence.

About CSIRO

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](#) and [Space and Astronomy](#) for more information.

CSIRO is a values-based organisation. In your application and at interview you will need to demonstrate behaviours aligned to our values of:

- People First
- Further Together
- Making it Real
- Trusted