Position Details

Research Projects – CSOF5

THE FOLLOWING INFORMATION IS FOR APPLICANTS	
Advertised Job Title	Systems Engineer (Integration and Verification)
Job Reference	98433
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 or Geraldton, 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

CSIRO is expanding the Assembly, Integration and Verification (AIV) Team to include a Systems Engineer (Integration and Verification) for the development of the Integration and Verification activities for the SKA Low Telescope.

The Systems Engineer (Integration and Verification) is responsible for maintaining and updating the AIV Flow at System level and then supporting the design and development of Formal Test Events at quality milestones in the Flow.

The Systems Engineer (Integration and Verification) will have domain expertise in one or more of the following areas: Systems Engineering, Requirements Engineering, Model Based Systems Engineering, Computer Science, Electrical Engineering, RF Engineering, Digital Signal Processing, Mixed Signal Systems, Timing and Signal Distribution, Networking.

The Systems Engineer (Integration and Verification) will use their domain expertise to expand the AIV team knowledge in all areas of the SKA Low Telescope system to identify system level non-conformances, enhance the fault finding, root cause analysis and inform recommended actions by the responsible party, including domestic and international stakeholders and suppliers.

The Systems Engineer (Integration and Verification) will also take an active role in the Test Events themselves as part of the AIV Team to verify the SKA Low Telescope System against its System Level Requirements.

This role reports to the AIV Team Leader who has the overall responsibility for the successful integration and verification of the SKA-Low Telescope.

The role can be based in either Perth or Geraldton with other AIV team members but may involve mutually agreed occasional domestic and international travel to the SKA-Low Construction site, other CSIRO offices and supplier locations.

The AIV team works closely with the SKA science, engineering and project communities around the world and is as diverse in culture, skills, and location as they are. We want to recruit and support

world-class talent that represents the diversity across our society. Our focus is therefore on finding someone who can bring their unique talents, experience, and perspective to enhance the AIV team knowledge and grow with the team as the project progresses.

Duties and Key Result Areas

- Contribute to the development of system level views of the SKA Low Telescope's architecture, with particular focus on integration and verification
- Continue to further develop the AIV Flow at System level and then support the design and development of formal Integration and Verification Events as part of the Flow
- Apply a 360° holistic approach to problem solving for troubleshooting the integration of the SKA LOW Telescope products
- Contribute to the development of test plans, procedures and reports using domain expertise
- Representing the AIV team at nominated supplier and site test events as a witness and provide evaluation and performance feedback at pre-test readiness and post-test events based on your technical expertise
- Support the interface analysis for the Integration of the SKA Low Products as they are accepted into the System Under Test (SUT) for defined project milestones
- Attend Supplier delivered Product training and then develop a System Level training scheme for the same for peers and other stakeholders
- Contribute to, and support the development of, system level troubleshooting and user guides and operating procedures
- Communicate with diverse stakeholders at all levels across multiple teams, time zones and cultures in the SKA-Low Telescope
- Be adaptable to, and support, different ways of agile working with a lean approach as part of the dispersed AIV team.
- Communicate openly, effectively, and respectfully with all staff, clients 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 the spirit and practice of CSIRO's Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
- Other duties as directed.

Selection Criteria

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

1. A degree or equivalent experience in a relevant Engineering discipline

2. Demonstrable experience of Model Based Systems Engineering and Requirements Management principles and experience in integration, testing and verification in high technology projects at system level

3. Evidence of proactive identification and resolution of both technical hardware and software issues with stakeholders and suppliers through engineering analysis

4. Proven ability to communicate and translate project needs into test plans and procedures and confirmation of test outcomes to System Requirements.

5. Lived experience of being part of a multicultural and diverse team.

Desirable:

1. Knowledge of Modelling Languages eg UML, SysML, BPMN and architecture frameworks eg UAF
2. Membership/Certification of an International Systems Engineering Professional body eg INCOSE
3. Experience and Domain knowledge in radio astronomy or scientific observing systems
4. Working knowledge of supporting tools such as Jira, Jama, DOORS, Confluence, ALIM, Miro, Cameo, Rhapsody
5. Experience of technical writing in a scientific setting
6. Training and mentoring of colleagues and peers

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