# Position Details

## Research Projects – CSOF5

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| The following information is for applicants |
| Advertised Job Title | Senior Software Engineer – Australian SKA Regional Centre (AusSRC) |
| Job Reference | 100835 |
| Tenure and work schedule | IndefiniteFull-time (**preferred**) *We will explore options for part-time (min. 0.6 FTE) and flexible work arrangements based on needs of the role and individual circumstances.* |
| Salary Range | AU$114,219 – AU$123,605 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) and office arrangements | Sydney (Marsfield), NSW*Flexible work arrangements may be considered* |
| Relocation Assistance | 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 | Head of Software Development, AusSRC |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Gordon German, Head of Software Development – AusSRC, via email at gordon.german@csiro.au |
| Support and workplace adjustments | We offer a range of reasonable supports and workplace adjustments. Please let us know via email Piumi.Desilva@csiro.au (Piumi De Silva – Talent Acquisition Partner) 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, in the areas where we live and work 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](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### About CSIRO

As Australia's national science agency, CSIRO is solving the greatest challenges through innovative science and technology. Many of our iconic innovations were once considered impossible until someone, just like you, joined us and took on the challenge.

As one of the world’s largest multidisciplinary mission-driven research organisations, we are focused on the issues that matter the most: for our quality of life, for the economy and for our environment. We believe diverse teams are more effective and deliver more innovative outcomes. When we all focus on the big things that really matter, and work in partnership with our communities and [Indigenous Australia](https://www.csiro.au/research/indigenous-science), Australian science and technology can solve seemingly impossible problems and create new value for all Australians. Visit [CSIRO.au](https://www.csiro.au/) for more information.

### Role Overview

Senior Software Engineers in CSIRO conduct innovative software development within a research environment, leading to scientific achievements that are aligned with CSIRO’s strategies. The Senior Software Engineer will work as part of a team in the development and support of software components for the Australian SKA Regional Centre (AusSRC). A key focus of this role will be the links between AusSRC and the Data Central Science Platform, run by AAO at Macquarie University.

The Square Kilometre Array Observatory (SKAO) is an intergovernmental project to build the world’s largest radio telescopes. In order to fully exploit the scientific output of the immense amount of data flowing from the telescopes, the SKAO is working with science communities across the world through SKA Regional Centres (SRCs), which are nationally lead hubs that form the basis of a global compute infrastructure that will:

* Provide data flow and data dissemination solutions from the SKA to users;
* Store, publish and curate SKA data;
* Post-process and analyse SKA data products;
* Provide SKA data user support.

The AusSRC is Australia’s portion of this international computing and data delivery network and has been funded – by the Australian Government through the Department of Industry, Science, and Resources (DISR) – $63 million over the next ten years (FY 2021/22 – 2030/31), to establish and build capability to support the Australian and international SKA science communities, thereby ushering in the next era of astronomical discovery and advanced data processing.

Data Central is the national astronomy data platform that facilitates research across the full data life cycle. It enables research across the electromagnetic spectrum by providing access to data locally and through the Virtual Observatory, tools for analysis and collaboration, and data storage and compute resources. Data Central supports teams using SKA Pathfinders such as ASKAP, MWA and MeerKat to carry out and publish innovative research.

This position will be based at the CSIRO Marsfield site in Sydney, New South Wales (NSW), and will involve contributing to the maintenance of key collaborative relationships with external stakeholders, particularly those based in NSW.

### Duties and Key Result Areas:

* Work together with project stakeholders, including SKA Scientists, Software Engineers, Data Central Engineers, and technical staff to determine their needs and priorities.
* Develop and maintain software components that coordinate and manage the dissemination of SKA data.
* Participate in operational support of AusSRC by contributing to fault analysis and deployment of software components.
* Share your knowledge and experience, create software solutions, and nurture innovation by becoming a valued and trusted team member.
* Create software solutions by exploring innovative ideas and approaches, and networking with science and engineering colleagues.
* May initiate and maintain collaborative relationships with external researchers and experts, manage contracts and transfer technology to industry.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Address problems promptly and in a constructive manner.
* Participate in work which is highly involved because of the unique or unusual features and complications, requiring the creation of original user experiences, the design & development of original technologies, and/or the development of original experimental or observational techniques and insightful interpretation of data.
* Participate in project scoping and planning, making significant contributions to the research or technological direction, and may advise on the level and type of services that are provided.
* Have a significant role in communicating research or technological results in internal and external forums and, where applicable, contribute to and/or generate scientific papers.
* Communicate openly, effectively, and respectfully with all staff, clients and suppliers, and form quality interpersonal relationships that reflect CSIRO’s values and 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 procedures and policy, Diversity initiatives and Zero Harm goals.
* Other related tasks as requested.

## **Selection Criteria**

#### Essential

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

1. A relevant Bachelor’s or Master’s degree, or equivalent relevant work experience, in Computer Science and Programming.
2. Extensive experience developing distributed or enterprise software solutions.
3. Proven ability to identify and manage complex problems and adapt quickly to changing circumstances.
4. Strong interpersonal and communication skills, including a demonstrated ability to liaise effectively with both technical and non-technical stakeholders.
5. Experience in a computation-focused science domain, such as astronomy/radio astronomy, bioinformatics, genomics, geosciences, control systems and their interfaces, or other related domains.

#### Desirable

1. Experience in formal software modelling and design techniques (e.g. UML, ERM, micro-services, functional programming, design patterns, abstract interfaces, etc).
2. Experience with:
	* Cloud and Containerisation technologies
	* High performance computing (HPC) systems and supporting services
	* Agile software development methodologies and practices
	* High-level software design and documentation
	* Continuous Integration and automated testing
	* Git and Git workflows
	* Database design and deployment (e.g. Postgresql)
	* Python, and-or C++, and Unix/Linux
3. Familiarity with JIRA and Confluence.

## **Not sure if you meet all the criteria?**

While it is CSIRO policy that the successful candidate must meet all the essential criteria, there are many ways to demonstrate this. Don’t let the list discourage you. If you are unsure about applying, please reach out to the contact on page 1 of this document so we can discuss the role further.

## **Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources 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 others‘ 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 own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

## **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 let us know via email Piumi.Desilva@csiro.au (Piumi De Silva – Talent Acquisition Partner) if we can help you to equitably participate in our recruitment process or the role itself.

## **Life at CSIRO and flexible working arrangements**

We [work flexibly at CSIRO](https://www.csiro.au/en/careers/life-at-csiro/Flexible-work), offering a range of options for how, when and where you work.  We can discuss flexible work arrangements with you during the recruitment process. CSIRO also offers a range of leave entitlements, [benefits](https://www.csiro.au/en/careers/life-at-csiro/Benefits) and [career development](https://www.csiro.au/en/careers/life-at-csiro/Career-development) opportunities. To learn more, visit [Careers at CSIRO](https://www.csiro.au/en/careers).

We celebrate the uniqueness of our workforce and are committed to creating [diverse and inclusive teams](https://www.csiro.au/en/careers/life-at-csiro/Diversity-inclusion-belonging) where everyone feels they belong. CSIRO is an equal employment opportunity organisation dedicated to recruiting people based on merit, and reflecting the diversity of the community we serve. We recognise true diversity encompasses all ages, nationalities, abilities, cultures, genders, sexualities, faiths, levels of education, diversity of thought and many more aspects of identity. By empowering diverse teams, our community is reflected in the solutions we create.

## **CSIRO values**

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

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| **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
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| **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
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| **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
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| **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
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## **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](https://www.csiro.au/en/about/policies/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.