# Position Details

## Research Projects- CSOF5

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| The following information is for applicants |
| Advertised Job Title | System Research Engineer - Scientific Data Management and Processing |
| Job Reference | 66561 |
| Tenure | Specified Term of 2 years Full-time |
| Salary Range | AU$98,735 to AU$106,848 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Kensington, WA |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Head of Software and Computing at CASS |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Juan Guzman via email at juan.guzman@csiro.au or phone +61 4 32699791 |
| 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. |

### Role Overview

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The System Research Engineer will be working as part of collaboration between CSIRO, UWA, Curtin University and Pawsey Supercomputing Centre to develop a technical architecture of the Australian SKA Regional Centre working as a member of the Australian SKA Regional Centre Design Study Program team. This position is a joint appointment with Pawsey Supercomputing Centre to develop and deploy the necessary computer and storage infrastructure capable of tackling SKA-scale data and computational challenges. You will also be contributing to the development of solutions for the SKA precursor surveys working with the ASKAP and MWA science teams, and transferring and applying solutions to other areas of data intensive sciences at Pawsey. The position is based in Perth (CSIRO, Kensington) with some time required to be spent in UWA (Crawley).

### Duties and Key Result Areas:

* Develop the system level requirements for the Australian SKA Regional Centre via liaising with MWA, ASKAP, SKA stakeholders.
* Contribute to the system level solutions in AusSRC MWA and ASKAP projects.
* Liaise with the vendors of hardware, software, cloud solutions.
* Develop a comprehensive understanding of latest trends in HPC, storage, networking, and cloud computing technologies that are relevant to the data, processing and visualisation challenges of the Australian SKA Regional Centre.
* Develop and test prototypes and solutions based on emerging technologies to support future needs in data-intensive science at Pawsey and the Australian SKA Regional Centre.
* Develop architectural solutions for storing, processing and visualising large astronomical data in the Australian SKA Regional Centre.
* Consult the development of non-astronomy systems at Pawsey.
* Consult and participate in procurement of next generation systems at Pawsey.
* Work with other Pawsey teams to achieve the best solutions.
* Liaise with clients to determine their needs and take personal responsibility for client satisfaction.
* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* Present results in a meaningful format, prepare reports for clients and/or write scientific papers for publication.
* Address problems promptly and in a constructive manner, selecting the most profitable lines of attack upon a problem, preparing detailed design proposals and experimental protocols.
* Undertake in experimental and/or observational research activities, often requiring the supervision and/or training of others to ensure experiments are established in accordance with research design, or as required.
* Draw on professional expertise, knowledge of other disciplines and research experience, recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines.
* 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, often regionally dispersed research team, and business unit 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 Making Safety Personal goals.
* Other duties as directed.

## **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 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.

## **Selection Criteria**

#### Essential

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

1. A tertiary qualification in Computer Science, Software/Electrical/Electronics/Computer Engineering, with substantial work experience in a relevant field.
2. Substantial and extensive experience with high I/O, high data volume, computationally intensive parallel applications and systems.
3. Demonstrated expertise in distributed storage, parallel processing systems and cloud computing technologies.
4. Excellent stakeholder engagement, high level communication skills and able to interact as a team player.

## **Desirable:**

1. Knowledge of agile software development would be an asset.
2. Knowledge of radio astronomy or other scientific data reduction would be an asset.

Special Requirements

* 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.
* The successful candidate must have the ability to travel occasionally, both nationally and internationally.

## **About CSIRO:**

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Find out more about the CSIRO [Astronomy and Space Science](https://www.csiro.au/en/Research/Astronomy)