# Position Details

## Research Projects- CSOF3

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| The following information is for applicants |
| Advertised Job Title | Project Engineer  |
| Job Reference | 100923 |
| Tenure | Specified Term of 3years Full-time |
| Salary Range | AU$73,567 - AU$93,630 per annum (pro-rata for part-time)plus 15.4% superannuation |
| Location(s) | Lucas Heights, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents
* Australian Temporary Residents who hold a valid work visa
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| Position reports to the | Team Leader |
| Client Focus – Internal | 67% |
| Client Focus – External | 33% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Yves Van Haarlem via email at yves.vanhaarlem@csiro.au or phone +61 2 9710 6721 |
| 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](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

**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).

### Role Overview

The CSIRO Sensing and Sorting research program develops world-leading technology that is deployed in the Australian and global mining industry. Our recently developed MEA (Mineral and Elemental Analyser) X-ray technology enables processing plants to monitor the composition of mineral slurries in real time.

The MEA technology is currently being advanced to a “beta” version, incorporating insights gained from recent field trials. This role supports the future commercialisation plan as well as the standing CSIRO engagements involving the technology. The engineer will perform the following project tasks and research development:

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* Work to develop technical hardware and software improvements that will assist the robustness and supportability of the MEA technology to reduce maintenance requirements.
* Increasingly front face to end-users and work with them to solve specific plant installation issues, troubleshooting, potential analyser modifications and compliance with plant standards, especially during critical trial phases.
* Increase our team capability for supporting the MEA run-time software platform, building a wider capability that may cross over into other X-ray developments.
* Develop extensive MEA manufacturing documentation and develop initial production channels to provide beta manufacturability, with technical readiness to facilitate future commercialisation activities.

We seek engineers with a strong hands-on approach with good knowledge of automation, hardware-software interfacing and manufacturing process.

### Duties and Key Result Areas

* Under limited supervision, design and perform experiments and laboratory analyses, design new processes or apparatus by adapting existing techniques and components to meet special circumstances or undertake modifications to methods requiring new development.
* Design data recording and entry systems.
* Development, documentation and (organise) production of custom-made electronic interface and communication boards.
* Develop, test and modify new software applications as required.
* Perform analyses or technology development activities using a range of techniques, often working on several parallel and competing tasks.
* Conduct literature reviews, investigations and inspections in the field or laboratory, including associated analysis involving statistical or graphics software.
* Work with discretion to optimise timing of operations within the work team’s plan to meet experimental and/or project demands and deadlines.
* Independently propose and test possible solutions to resolve identified problems.
* Responsibility for maintaining laboratory or fieldwork consumables and scheduling and instructing staff in the use of shared equipment.
* Respond courteously and efficiently to client requests, maintaining clear communication regarding mutual expectations and monitoring client satisfaction.
* 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 research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Travel to client sites in Australia, and potentially overseas, to perform installation, commissioning and maintenance duties for MEA technology trials.
* Other duties as directed.

## **Selection Criteria**

#### Essential

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

1. Relevant bachelor’s degree or equivalent relevant work experience in engineering (electronic, mechatronic and/or software).
2. Instrumentation, control and automation/software design and development skill in a prototyping environment.
3. Demonstrated experience in technical project management, including working to project timelines and using systems and tools to progress workflows.
4. Strong communication and interpersonal skills to discuss and obtain information from

manufacturers, scientists and engineers.

1. Demonstrated ability to understand electrical schematics, electronic circuit function and mechanical drawings.
2. Demonstrated ability to perform functional testing of equipment to evaluate basic system operation.
3. A practical, hands-on approach to solving engineering problems.
4. Electronic and/or mechanical design automation (EDA) and design process documentation skills.
5. Ability to work effectively as part of a multi-disciplinary team.

## **Desirable**

1. Experience in developing software and hardware interfaces relevant to operating X-ray tubes, X-ray detectors, and equipment to align (motorised axis, stepper motors) for automation purposes.
2. Experience in PLC configuration and testing.
3. Experience in data recording and management (local and cloud).
4. Electrical license
5. Experience in Python programming

## **Required Competencies**

* **Teamwork and Collaboration:** Proactively seeks and considers the ideas and opinions of others from within and outside the team to help form decisions, plans or actions.
* **Influence and Communication:** Puts forward ideas by presenting factual information supported by data, definitions, examples, illustrations or other aids, which will assist in conveying meaning.
* **Resource Management/Leadership:** Provides instruction and assists other staff to complete allocated tasks and activities.
* **Judgement and Problem Solving:** Identifies and considers the implications of a range of available alternatives in order to select the most appropriate response to problems of a familiar or recurring nature.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Willingness to change ideas or perceptions based on new information, contrary evidence or other people's points of view. Prepared to try out different approaches.

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.

Include if relevant:

* 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.
* The successful candidate will need to pass ANSTO security clearance to be allowed on the CSIRO Lucas Heights site.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [CSIRO Mineral Resources](https://www.csiro.au/en/about/people/business-units/mineral-resources) 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