# Position Description

*LASC Software Engineer*

## Research Projects – CSOF3

The following information is for applicants

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| Advertised Job Title**:** | LASC Software Engineer |
| Job Reference: | 61149 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens and Australian Permanent Residents Only* *For Specified Term positions, we will accept applications from Temporary Residents with working rights for the length of the term, who do not require sponsorship.*
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| Percentage of Client Focus - Internal: | 20% |
| Percentage of Client Focus - External: | 80% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries  | Jeremy Thompsonvia email: jeremy.thompson@csiro.au |
| Contact Details For Applying | Call 1300 984 220 or email careers.online@csiro.au.  |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ through the ‘People Hub’ icon  |

## Role Overview:

The Mining and Processing Technologies Research Group (MTRG) is one of the world’s largest mining research groups and has a goal of delivering transformational change to the mining industry. The MTRG Mining and Processing Team (MPT) has developed a number of world-first technologies for the Australian and International mining industry. This includes the LASC & ExScan® systems for underground coal longwall mining automation as well as systems for continuous miner automation, road header automation and coal seam sensing and characterisation.

MPT is seeking a Research Projects Software Engineer to join their Automation Technology team. The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational work, and in carrying out the more practical aspects of the work.

This role has been created to provide software engineering support across the suite of existing and emerging projects being undertaken by the Mining and Processing Technologies Research Group. This role will cover a wide range of activities, including software development, documentation, sensor data analysis, algorithm development, system design and integration.

## Duties and Key Result Areas:

* Provide software design, implementation and support for new and existing project applications as developed by the research group.
* 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 plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

## Competencies:

1. **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.**
2. **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.**
3. **Resource Management/Leadership: Provides instruction and assists other staff to complete allocated tasks and activities.**
4. **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.
5. **Independence: Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).**
6. **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.

## Selection Criteria:

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

1. Relevant Bachelors/Masters Degree or relevant industry experience
2. Strong proficiency in C++
3. Previous experience designing and developing software in an industrial setting
4. Experience with field trials of remote controlled research test equipment, including precision data acquisition and results analysis
5. Background in developing software interfaces for industrial instrumentation and sensors
6. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks under general direction from Scientific Researchers
7. The ability & willingness to contribute novel ideas and approaches in support of scientific investigations and experiments
8. Experience with Linux operating systems in embedded environments.

## Desirable Criteria:

1. Experience in software development for microprocessors
2. Background in UI/UX development
3. Previous experience with software development using the QT framework
4. Background in designing software for augmented reality and assistive technology systems
5. Experience with laser based sensing technologies
6. Previous experience with the development of software automation components for industrial and

 robotic control systems.

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Find out more about CSIRO [Energy](https://www.csiro.au/en/Research/EF)