# Position Details

## Research Projects- CSOF4

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| The following information is for applicants |
| Advertised Job Title | Robotics Mechatronic Engineer |
| Job Reference | 95333 |
| Tenure | Specified Term of 3 years, Full-time |
| Salary Range | AU$96,811 - AU$109,527 per annum (pro-rata for part-time) plus up to 15.4% superannuation |
| Location(s) | Pullenvale, Queensland |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates |
| Position reports to the | Team Leader, Advanced Mechatronic Systems |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Nick Panitz via email at Nick.Panitz@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](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 role of Research Projects staff in CSIRO is to collaborate in scientific and technological activities with other research staff, usually by assisting with detailed planning, undertaking or assisting with experimental, observational or technology development work, and in carrying out the more practical aspects of the work.

CSIRO Robotics is one of the leading robotics and autonomous systems research groups in the world, based in Brisbane, Queensland, Australia. We are part of the Cyber-Physical Systems Research Program at CSIRO’s Data61 Business Unit. We develop foundational and applied research for a broad range of domains including agriculture, advanced manufacturing, mining, biodiversity, and biosecurity. Our systems provide scientific, social, and economic benefits through cutting-edge science, deeper understanding of natural and built environments, increased productivity and human safety, and augmentation of human capabilities.

As Part of the Advanced Mechatronic Systems Team, the successful candidate will be based at the CSIRO QCAT site in Brisbane and provide mechatronics ability for a variety of research and external projects in the Robotic Design and Interaction Group. They will harness a variety of skills, including the prototyping and development of electronics systems in our robotics projects, software application and firmware development, and an understanding of mechatronics/mechanical design more broadly. They will also provide mechatronic solutions and test equipment for our experimental projects to support science delivery.

This role will also be responsible for supporting key internal and external projects with CAD and 3D printing. They will be responsible for the effective operation and upkeep of a variety of 3D printers, including FDM, Resin, and Poly Jet. Additionally, they will provide relevant technical and maintenance support to a variety of projects in the Group. As part of the position, CSIRO will offer training in its specialist equipment.

### Duties and Key Result Areas

* Supporting CSIRO projects by providing robotics-focused mechatronic engineering for a variety of commercial and research projects
* Mechanical & electrical design to specification, manufacture, and assemble of robotic parts & systems
* Develop, test and modify new software applications as required (C++, Python)
* Writing software drivers & efficient interface code (C, Python)
* Ability to read and interpret documents such as drawings, operating instructions, safety rules, and procedure manuals, and apply Standard Operating Procedures
* Supporting CSIRO research projects in the use of CAD and 3D printing for rigid and soft robotics.
* Operating and maintaining FDM, Resin, and Poly Jet printers.
* Maintaining 3D Print laboratory consumables, costings, scheduling, and instructing staff in the use of shared equipment
* Work with discretion to decide on the timing of operations within the work team’s plan and plan ahead to meet experimental and/or project demands.
* Independently test possible solutions to resolve identified problems.
* May have responsibility for maintaining laboratory or fieldwork consumables and scheduling and instructing staff in the use of shared equipment.
* Oversee the activities of less experienced staff and provide guidance on experimental/ technological techniques and protocols as required.
* 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, regionally dispersed 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.
* 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 an appropriate field of Engineering
2. Demonstrated experience in mechatronic design and fabrication
3. Track record of completing relevant projects using 3D printers

## **Desirable**

1. CAD modelling and mechanical design skills
2. Hands on experience with robotics
3. Experience with Altium Designer or equivalents for schematic design and PCB layout
4. Creation of custom firmware for sensors and actuation
5. Demonstrated experience in collaborating with external clients

## **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:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **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:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **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.

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.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [CSIRO Data61](https://www.data61.csiro.au/) 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