# Position Details

## Research Scientist/Engineer- CSOF6

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| The following information is for applicants | |
| Advertised Job Title | Senior Research Engineer - Electronics |
| Job Reference | 77241 |
| Tenure | Specified Term of 3 years |
| Salary Range | AU$115k to AU$135k pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Sydney (Lindfield) NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian Citizens Only |
| Position reports to the | Team Leader – Electromechanical Development |
| Client Focus – Internal | 20% |
| Client Focus – External | 80% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Scott Martin via email at [scott.martin@csiro.au](mailto:scott.martin@csiro.au) or phone +61 2 9413 7746 |
| 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](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Role Overview

The role of Research Engineer Staff in CSIRO is to conduct innovative research/engineering 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 Senior Research Engineer - Electronics role will join the Electromechanical Development team within CSIRO Manufacturing. This is a ground-breaking team developing quantum sensing technologies for use in a variety of cutting-edge applications. Reporting functionally to a Principal Research Engineer, this role will contribute to device development essential to the completion of key project deliverables.

This role is offered on a full-time, part-time (minimum 0.8 FTE) or job share basis (if circumstances permit).

### Duties and Key Result Areas

* Under general direction, use professional expertise, knowledge of other disciplines and research experience and achievement to formulate, develop and complete an approved research program.
* Design, construct, program and document of electronic control and support systems for the various CSIRO projects.
* Develop electronic modules of research prototype systems including:
* Electronic control and support systems for the various projects.
* Testing and validation.
* Mechanical design.
* Electronic circuit design/layout.
* Procurement of subsystems and liaison with suppliers.
* Construction and testing.
* Programming.
* Documenting and contributing to internal and client reports.
* Participation in and contribution to planning, budgeting and drafting of new proposals.
* Develop challenging but realistic research plans and negotiate resource requirements with research managers or clients.
* Be responsible for smaller research projects or elements of larger projects within and/or across Business Units.
* May lead and supervise staff to ensure experiments are established in accordance with the research design and are completed within the agreed timeframes and budget.
* Act as a trusted advisor, utilising knowledge of the clients’ business and understanding of their underlying needs.
* Communicate research results to clients and the scientific community through oral and written reports and may prepare documentation for patent applications.
* May advise policy makers and inform and transfer knowledge to non-scientific audiences as required.
* Maintain confidentiality when dealing with commercially sensitive/confidential material.
* 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, 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:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **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:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goal and priorities.

## **Selection Criteria**

#### Essential

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

1. A PhD or an equivalent combination of qualifications and research experience in a relevant field such as electronics engineering.
2. Significant experience with analogue electronics.
3. Familiar with inter-chip communication protocols (e.g. I2C, SPI, etc.) coupled with an understanding of data logging and graphical data reporting.
4. Ability to use schematic capture and PC board layout software (Altium Designer preferred).
5. Experience and proficiency in programming, data manipulation, and data visualization using languages such as Python or MATLAB, ANSI-C and C++.
6. Excellent communication skills with a strong client focus, and a history of successful relations across a range of stakeholder groups.
7. The ability to work effectively both individually and as a member of a high-functioning technical team with members from diverse backgrounds.
8. Demonstrated ability to identify original, creative and innovative solutions by generating and pursuing novel ideas to problems.

## **Desirable**

1. Relevant experience in a research environment.
2. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be required to obtain and maintain a security clearance at a Negative Vetting Level 2.

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* 1. People First
  2. Further Together
  3. Making it Real
  4. Trusted

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