# Position Details

## Technical Services- CSOF4

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| The following information is for applicants | |
| Advertised Job Title | Software Engineer/Instrumentation Engineer - Seagoing |
| Job Reference | 90750 |
| Tenure | Specified term of 3 years - Full-time |
| Salary Range | AU$89k - AU$101k pa (pro-rata for part-time), + up to 15.4% superannuation |
| Location(s) | Hobart, TAS |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian or New Zealand Citizens and Australian Permanent Residents |
| Position reports to the | Team Leader, Seagoing Instrumentation Engineer |
| Client Focus – Internal | 100% |
| Client Focus – External | 0% |
| Number of Direct Reports | 0 |
| Enquire about this job | Stephen Thomas via email: [Stephen.Thomas@csiro.au](mailto:Stephen.Thomas@csiro.au) or phone: 0438928152 |
| 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. |

**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).

### Role Overview

The Software Engineer/Instrumentation Engineer – Seagoing, enables and supports scientific voyages on the research vessel *RV Investigator,* contributing to world-class scientific blue-water research. The Software Engineer/Instrumentation Engineer is a member of the Instruments and Electronics Group, within the CSIRO Engineering and Technology Program.

The *RV Investigator* has a broad range of vessel-based scientific instrumentation and advanced deployable equipment used to enable the research of the Australian and International science community. **A requirement of the role is to provide up to 85 days per year of seagoing support on voyages that are typically 3 to 8 weeks in duration**. Whilst at sea, the role holds responsibility for the development and maintenance of onboard software; operation and deployment of scientific systems; electronic fault-finding and repairs; operation and maintenance of ship-based instrumentation; provision of technical support to voyage participants; and liaising with scientists to assist them in achieving the scientific objectives of the voyage.

Onshore, the role includes development of software to control and operate scientific equipment and systems, maintenance of existing software, repairs and maintenance of instrumentation systems, and provision of technical advice to stakeholders involved in the planning and execution of scientific voyages. The role’s primary focus is software engineering, but also involves mechanical assembly and modification and instrumentation operation, maintenance and repair.

On-the-job training and mentoring will be provided for CSIRO-specific systems and the seagoing aspect of the role.

### Duties and Key Result Areas

* Participate in research voyages on the RV Investigator and contribute to the achievement of research objectives by operating scientific equipment, performing maintenance and repair of instrumentation, and reporting on equipment performance and status.
* Develop and maintain software systems in support of the operation and deployment of scientific equipment and systems.
* Proactively identify and take ownership of opportunities for improvements in systems and procedures; analyse underlying issues of complex and ill-defined problems; develop solutions and manage them through to delivery.
* Contribute to the smooth and orderly running of electronics and instrumentation support on the vessel in areas such as documentation, parts inventory, service of equipment and tools, and preparation and dispatch of equipment to and from the vessel and remote ports.
* Liaise with clients to determine their needs and take responsibility for their satisfaction.
* As required, proactively manage non-routine tasks which will contribute to research voyage objectives.
* Communicate openly, effectively, and respectfully with all staff, clients, ship’s crew and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a technical team and with other industry colleagues, 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.

## **Selection Criteria**

#### Essential

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

1. A tertiary qualification in Information Technology or an applicable Engineering field, and/or equivalent relevant experience.
2. Demonstrated computing skills as follows:
   1. The ability to develop software in modern languages (e.g. Python) and experience with frameworks, libraries and languages relevant to the development of operational systems and user interface applications.
   2. An understanding of software engineering methodologies and version control systems.
3. Demonstrated ability to fault-find and problem-solve routine or unusual faults in scientific instrumentation, electronic systems, computers, and network systems.
4. Proven mechanical aptitude with the ability to undertake assembly, repairs and maintenance using hand tools and/or machinery.
5. The ability to remain calm under pressure, with strong time management and prioritisation skills and demonstrated versatility in ambiguous, non-routine and/or urgent situations.
6. Excellent interpersonal, oral and written communications skills, including a demonstrated ability to liaise appropriately with colleagues and clients, clearly document software, and produce manuals and/or reports.
7. Demonstrated ability to proactively identify system problems or improvements, analyse underlying issues and requirements, develop solutions, and manage implementation.

#### Desirable

1. The ability to carry out embedded firmware development or maintenance using languages such as C/C++.
2. An understanding of electronic circuit and PCB design, development and repair.
3. Relevant workplace training and seagoing experience – WSAH, forklift, ESS/BOSIET/STCW.

## **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:** Recognises 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

* The successful candidate will be asked to obtain and provide evidence of a National Police Clearance or equivalent. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* Appointment to this role will be conditional on the candidate passing a stringent Remote Area Seagoing Medical, and the ability to obtain a Maritime Security Identification Card.
* The appointee will be able and willing to be based at sea on a research vessel for 12h shifts, 7 days per week, for up to 85 days per year, with minimal supervision after adequate training.

## **About CSIRO**

We solve the greatest challenges through innovative science and technology. Visit [CSIRO Online](http://www.csiro.au/) and [National Research Collections Australia](https://www.csiro.au/en/about/facilities-collections/Collections) 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