



## Senior Science Systems Engineer

<b>Job Reference</b>	80003002
<b>Classification</b>	APS 6
<b>Division</b>	Australian Antarctic Division
<b>Branch</b>	Technology & Innovation
<b>Section</b>	Polar Technology
<b>Location</b>	Hobart, TAS – 203 Channel Highway, Kingston, Tas 7050
<b>Employment Status</b>	Ongoing (permanent)
<b>Hours</b>	Full time
<b>Security Clearance</b>	Baseline

### Who we are

The Australian Antarctic Division (AAD) is part of the Commonwealth Department of Agriculture, Water and the Environment. As primary agency for Australia's Antarctic Program (AAP), the AAD is responsible for achieving the Australian Government's Antarctic goals. These goals are: to maintain the Antarctic Treaty System and enhance Australia's influence within it; to protect the Antarctic environment; to understand the role of Antarctica in the global climate system; and to undertake scientific work of practical, economic and national significance. The AAD also has responsibility for administering the Australian Antarctic Territory and the Territory of Heard and McDonald Islands.

The Technology & Innovation Branch (T&I) is responsible for leading the design and development of new capabilities, emerging and innovative technologies for the AAP in the areas of Antarctic science, operations and asset management.

The Polar Technology section supports the advancement of Australia's strategic, scientific, environmental and economic interests in the Antarctic by providing and managing technical support to the Australian Antarctic Science program in areas including data collection, acoustics, computing, instrumentation and electronics.

### The Job

The Senior Science Systems Engineer reports directly to the Technical Services Manager who will provide broad guidance on the tasks to be performed. From time to time, they will be directed to work under the supervision of other senior team members.

Based at Head Office of the Australian Antarctic Division in Kingston, the Senior Science Systems Engineer will join the Polar Technology section to provide technical support across the Australian Antarctic Program and may, on occasion, be assigned responsibility for the supervision of facilities located at Kingston, Tasmania. The Senior Science Systems Engineer will also support the activities of the general Antarctic Science program and will have responsibility for specialised computer systems, electronic instrumentation and marine science equipment associated with the Australian Antarctic Division's (AAD) Marine Science program.

This includes responsibilities for equipment and systems aboard the AAD Icebreaker, the *RSV Nuyina*.

The Technical Services sub group of Polar Technology is a small, high performing team which plays a critical role in the organisation, resourcing and equipping of many Antarctic operations and projects. The position undertakes high level technical work in the operation and maintenance of specialised electronic instrumentation and science equipment in a dynamic work area that provides many opportunities to work on different projects and tasks concurrently. The successful applicant will be able to work under limited direction both independently and as a team member. On occasion, the successful candidate will lead and manage small dedicated teams.

The successful candidate will be self-motivated with excellent technical skills and be flexible and adaptable and able to work in an environments which are sometimes stressful and where priorities change, sometimes in short and / or shifting time frames. They will have sound judgement and highly developed problem solving capabilities and be innovative in their approach to the development of solutions. They will have the skills and capacity to develop and support quality working relationships with a range of stakeholders to respond to needs, manage expectations and solve problems. They will have good time management skills and excellent communication skills, both written and verbal. They will be adaptive, proactive, innovative and resilient.

Under limited direction from the Technical Services Manager, the Senior Science Systems Engineer is required to:

- Provide electronic and computing support in preparation for, and during marine science voyage(s) or other expeditions.  
This includes designing, constructing, calibrating, modifying, fault find/repairing, maintaining and operating modern electronic instrumentation and systems. This may include data collection and storage systems, instrumentation, marine, laboratory, IT, and mechanical gear.
- Produce and maintain high quality technical documentation and drawings within a formal engineering documentation management system.
- Manage scientific infrastructure, and implement and promote improved associated work practices.  
This includes asset and hazardous goods management as well as maintenance of training programs and records in addition to managing safety documentation/systems for all personnel.
- Provide services to clients including resolving resourcing conflicts and solving high level and complex technical issues.
- Work productively and effectively both as an individual with limited supervision, as a team member and occasionally as the manager of small teams, to develop innovative solutions to meet technical or operational problems.  
This may be in remote areas without immediate technical or logistical support.
- Maintain underway data collection systems utilising modern computing techniques including:
  - Linux and Windows system administration;
  - Server virtualisation ;
  - Programming in languages such as Python and/or JavaScript;

- Software revision control systems such as GIT;
- SQL database management.
- Occasionally manage small dedicated teams, including effective supervision and management of staff performance in operational activities at sea while ensuring safe working conditions and staff wellbeing.

## **What we are looking for**

### **Knowledge and experience**

- A Bachelor's degree in Electronics or Marine Engineering (with majors in instrumentation) from an Australian tertiary institution, or a comparable overseas institution.
- Experience as a team member working in demanding environments.

### **Skills and capabilities**

We thrive when our teams are made up of people from different backgrounds, cultures, genders, education, training and skills.

Skills and capabilities form the selection criteria that candidates will be assessed against.

The required skills are:

- Ability to support the strategic direction of the organisation by:
  - displaying awareness of the strategic context in which the Australian Antarctic program operates;
  - supporting the vision, mission and objectives of the Australian Antarctic Program.
- Proven ability to safely operate and troubleshoot complex instrumentation systems based on a sound understanding of underlying physical principles.
- Demonstrated ability to work productively and effectively both as part of small teams in isolated environments and as part of the wider corporate environment of the Australian Antarctic Division. This includes:
  - resolving and reporting problems and/or technical issues;
  - dealing sensitively with other personnel;
  - taking personal responsibility for achieving work objectives and
  - supporting and encouraging safe working practices.
- Well-developed communication skills, both written and verbal including the ability to manage, maintain and develop technical and non-technical reports and documentation.
- Ability to work effectively at sea as part of a small diverse team in remote and challenging locations including long duration voyages in the southern ocean and Antarctic waters.
- Strong computing skills including Linux server and client side programming and system administration. Experience in python and JavaScript will be highly regarded.
- Demonstrated and proven experience and skills to coordinate and manage small teams for dedicated tasks , including effective supervision of staff, including performance management and conflict resolution.

## **Desirable/Mandatory qualifications**

- A Bachelor's degree in Electronics Engineering or Marine Engineering (with majors in instrumentation) from an Australian tertiary institution, or a comparable overseas institution.
- The successful candidate will be proficient with Microsoft Office tools (i.e. Word, Excel, Power Point) and electronic document management systems.
- The successful applicant will be expected to undertake periods of fieldwork in Antarctic and sub-Antarctic regions, and therefore will be required to meet specific medical, adaptability and personal qualities requirements as detailed below in Employment Conditions.
- The successful applicant must hold and maintain an Automatic or Manual driver's licence.

## **Employment Conditions**

This position is based at Kingston, Tasmania and is a sea going position which will require the occupant to regularly participate in Marine Science Voyages which may be up to 3 months duration and may require participation on other voyages or at stations in support of AAD Science Program.

The successful applicant will meet mandatory qualification requirements, satisfy required security and character checks and be the one who best meets the requirements of the position overall.

For this position there are specific medical, adaptability and personal qualities requirements because the successful applicant will be expected to undertake periods of fieldwork in Antarctic and sub-Antarctic regions and will therefore be required to meet the following criteria:

- Demonstrate the range of personal qualities and interpersonal skills necessary to perform as a successful team member within isolated Antarctic and subantarctic environments; and
- Be certified as fit for Antarctic service by the AAD's Polar Medicine Unit, after tests conducted by a medical practitioner nominated by the AAD.
- Demonstrate an ability to effectively adapt and respond to the demands of living and working in an isolated and confined environment as determined by a psychological (adaptability) assessment.

## **Eligibility and other requirements**

**Citizenship** - To be eligible for employment with the Department of Agriculture, Water and Environment you must be an Australian citizen.

**Pre-employment Check** - Your suitability for employment will be assessed through a pre-employment screening process. This process includes a requirement to undergo and satisfy a National Police Check, referee checks, character clearance and where required a pre-employment medical assessment, specified mandatory qualification(s) validation and a probation period of 6 months.

The successful applicant must hold and maintain a valid Australia motor vehicle drivers license.

## **Statement of claims**

Applicants are required to submit a current Curriculum Vitae / Resume and a statement of claims (**five page maximum**) outlining why you are interested in this position and why you believe that you have the skills, knowledge and experience to be considered for this role.

Please provide examples which demonstrate your ability to perform the duties of the position.

The key areas, or points, listed above describe the particular skills, abilities, knowledge and where applicable the qualifications required to achieve the desired outcomes for the role and your statement of claims against these is an essential part of the shortlisting process. If

shortlisted, applicants may be asked to attend an interview to provide further examples against these key areas/points to demonstrate their ability to perform the duties of the position.

Applicants must demonstrate the ways in which they will be of value for the job and the organisation. You must make sure that you adequately address each key area or point and cite evidence of your suitability. Do not simply state that you meet the requirements - it is essential that you provide examples from your current or past role(s) which demonstrates how you meet each of the key areas or points. You should focus on how your experience, achievements and capabilities will enable you to successfully undertake the responsibilities of the role(s).

The Australian Public Service Commission has produced an excellent guide to applying for jobs in the Australian Public Service. You can access this information at APSC's [Cracking the Code](#).

### **Work Health and Safety Obligations**

All workers (APS 1-Secretary) have a duty to take reasonable care for their own health and safety whilst at work, to ensure their acts or omissions do not adversely affect the health and safety of other persons and to comply with any reasonable instruction given to comply with the Work Health and Safety legislation.

All supervisors and managers (APS5-EL1) play a significant role by modelling safe work behaviours and clearly setting the standard for acceptable behaviour in the workplace. Supervisors and managers play a critical role in supporting 'Officers' to exercise due diligence and in consulting with duty holders.

An Officer (EL2-Secretary) makes and participates in making decisions that affect the whole or a substantial part of the department. Employees at the SES Band 2 and above classification are considered to be Officers under the Work Health and Safety Act 2011 (Cth) with all EL 2 and above required to complete officer due diligence training. Officers have a duty to be proactive and continuously ensure that the department complies with relevant duties and obligations.

### **RecruitAbility**

RecruitAbility applies to this vacancy. Under the RecruitAbility scheme you will be invited to participate in further assessment activity for the vacancy if you choose to apply under the scheme; declare you have a disability; and meet the minimum requirements for the position. For more information see <https://www.apsc.gov.au/recruitability>

**Contact**

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Date: 31 March 2021