



POSITION DESCRIPTION

Position Title:	Active Acoustic Signature Modelling Researcher
Position Reference Number:	PDMD005
Division	Maritime Division
Position Classification:	S&T 3-4 (Above)
Position Location:	Fishermans Bend (Victoria)
Security Level:	NV1
Minimum Academic Qualification:	PhD
Enquiries:	James Forrest james.forrest@dst.defence.gov.au (03) 9626 8374

Academic Disciplines

Aerospace/ Aeronautical Engineering, Naval Architecture	Chemical, Radiological, Biological, Food sciences	Materials Science
Computer Sciences, IT, Software Engineering, Telecommunications	Mathematics and physics	Psychology and Social Sciences
Mechanical and Mechatronic Engineering (including robotics)	Electronic/ Electrical Engineering	Other

Position Overview

The Active Acoustic Signature Modelling Researcher will join a small team working on the assessment and control of underwater acoustic signatures for current and future Navy ships and submarines. This position will focus on the modelling of active acoustic signature (target echo strength) of submarines, contributing to ensuring the operational effectiveness of Australia's submarine fleet.

Position Duties

Under limited direction, the Active Acoustic Signature Modelling Researcher will:

1. Develop and apply modelling tools for the analysis of the acoustic target echo strength of maritime platforms, with an emphasis on submarines.
2. Contribute to assessments of acoustic target echo strength for maritime platforms using these tools. This will include direct use of tools, or interfacing with tools and results from other team members; tools may range from theory-based models developed in house to numerical models built with finite-element/boundary-element packages. The modelling process may also include interpretation and use of measured acoustic material performance data, and engineering data such as submarine specifications and drawings.
3. Participate in laboratory tests and field trials to collect relevant acoustic data to validate models or directly assess acoustic target echo strength.
4. Participate in cooperative research and development programs as required.
5. Provide timely reports for clients and DST leadership on relevant research areas, and where possible, contribute to the publication of research in scientific journals.

Other Requirements

Interstate travel may be required to attend scientific conferences, technical workshops or to participate in field trials.

Trials may include trials at sea.

The successful candidate will be required to undergo a Negative Vetting 1 security clearance.