



POSITION DESCRIPTION

Position Title:	RF Countermeasures Engineer/Scientist
Position Reference Number:	PDCEWD005
Division	Cyber and Electronic Warfare Division
Position Classification:	S&T3-4 (APS4/5-6)
Position Location:	Edinburgh, SA
Security Level:	NV1
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Academic Disciplines

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

Position Overview

The Radio Frequency (RF) Countermeasures Engineer/Scientist will be responsible for developing RF countermeasures systems and techniques to safeguard the Australian Defence Force (ADF) in its operations. The successful candidate will undertake research and will develop novel algorithms and jamming techniques which will be tested in the laboratory and in the field. The successful candidate will work across several projects in a fast-paced, client-driven environment comprised of 20 engineers and scientists, and possess a desire to advance Australia’s science and technology (S&T) capabilities in new and exciting ways.

The successful candidate will possess knowledge and experience in one or more of the following areas:

- A background in RF, radar, electronic warfare, sensors or communications systems.
- Prototyping/programming software defined radios (SDRs) or field-programmable gate arrays (FPGAs).
- Data processing, data analysis and reporting.
- Machine learning using MATLAB or Python environments and graphics processing unit (GPU) programming.
- Planning and performing experiments.

Position Duties

- Performing research into electronic warfare (EW) signal processing techniques.
- Prototyping of SDRs and FPGAs and programming of RF countermeasures systems.
- Preparation of equipment for trials and participation in domestic and international land, sea and air trials.
- Developing and implementing modern machine learning techniques in real-time using GPUs.
- Performing modelling and simulation of complex electronic warfare (EW) systems and electro-magnetic environments (EMEs) using Matlab/Simulink.
- Data analysis and presentation of results through presentations, client reports and scientific papers.
- Working with ADF clients to address difficult scientific and operational problems.
- Growing Australia’s RF countermeasures science and technology (S&T) capabilities as well as contributing to larger international projects.

Other Requirements

- Ability and willingness to participate in experiments with the ADF in remote trial locations.
- Approximately one month of domestic or international travel per year.