

## CEWD001 Communications Science

**Location:** Edinburgh, South Australia

### Overview:

As a member of DST Group's Cyber and Electronic Warfare Division, you will undertake research and development in the field of military satellite communications (MILSATCOM) survivability, with the goal of enhancing and protecting the ADF's satellite communications networks. The Protected Satellite Communications science capability supports the Australian Defence Force in the provision, acquisition and operation of MILSATCOM.

The specific focus of the position is specialised satellite communications waveforms for operation in contested environments. The research and development will be undertaken within a group framework that includes related R&D programs in the areas of satellite system network defence, high mobility satellite communications and Software Defined Radio.

The successful applicant will undertake the following major duties relating to MILSATCOM survivability:

- a) Research and development in novel satellite communications waveforms;
- b) Research and development in communications signal processing;
- c) Military satellite communications system modelling and simulation;
- d) Military satellite communications system experimentation and analysis;
- e) Provision of expert scientific and technical advice to Defence clients and stakeholders and other Commonwealth agencies;
- f) Conduct of and support to demonstrations and trials.

### Academic Requirement:

A PhD in one of the following areas:

- Electronic/Electrical Engineering
- Communications Engineering
- Computer Science

### Other Role Specific Requirements:

Demonstrated experience or ability in any or all of the following areas:

- Communications signal processing
- Radio waveforms
- Waveforms for operation in the contested radiofrequency environment
- Satellite communications waveforms
- Spread spectrum communications

Knowledge and/or experience in the following areas is considered as advantageous:

- MILSATCOM systems
- Software Defined Radio
- Simulation and modelling of wireless communications systems
- Communications testing and trials

### Notes:

Appointees will be initially engaged on a **BASELINE** security clearance with an upgrade to a **Secret/Negative Vetting 1 Security Clearance** required upon commencement.

### Written Application Position Specific Question (400 words max)

How could you apply your qualifications and experience in researching and developing robust communications waveforms to operate in the contested radiofrequency environment?