

NSID002 Postdoc: Information Integration

Location: Edinburgh, South Australia

Overview:

As member of the National Security, Intelligence Surveillance and Reconnaissance Division, you will undertake analysis, develop algorithms, and conduct research in support of integrated Intelligence Surveillance and Reconnaissance. The Information Integration capability supports the Australian Defence Organisation by developing and assessing novel algorithms that can deliver improved tracking and fusion performance. It provides advice on tracking and fusion effectiveness to a range of Defence clients, supporting major acquisition projects and their integration into the ADO enterprise. The role will contribute to key activities including:

- (a) Research to develop innovative methods for information fusion;
- (b) Implementation and testing of fusion algorithms and integration systems;
- (c) Analysis of operations and exercises to generate knowledge that enables improvements in warfighting capability;
- (d) Analysis of options against future capability requirements; and
- (e) Experimentation to test methods in an operationally relevant context.

Academic Requirement:

A PhD in one of the following areas:

- Engineering (Electrical, Computer Systems, or Aerospace)
- Computer Science
- Applied Mathematics & Statistics
- Mathematical Physics

Other Role Specific Requirements:

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

- Stochastic signal processing;
- Statistical estimation;
- Control theory;
- Mathematical optimisation;
- Computer programming to support algorithm development and testing ;
- Developing, employing and interpreting modelling and simulation tools;
- Experiment design and analysis.

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)

Please provide one or more specific examples of how your research has been influenced by experimental observation.