JOAD001 MARITIME CAPABILITY ANALYSIS

Location: Eveleigh (Australia Technology Park), New South Wales

Overview:
As member of DST's Joint and Operations Analysis Division, you will undertake analysis, develop models and conduct research in support of improving maritime warfare capability. The Maritime Capability Analysis science capability supports the Royal Australian Navy's current and future Fleets by providing balanced, impartial and timely advice that supports decisions about maritime capability. The role will contribute to key activities including:

(a) Experimentation to investigate future concepts and capabilities;
(b) Analysis to inform the needs and requirements of future capabilities;
(c) Analysis of options/alternatives against future capability requirements;
(d) Analysis of operations and exercises to generate knowledge that enables improvements in warfighting capability; and
(e) Research to develop innovative analysis approaches.

There is flexibility to tailor this role to skillset of the successful applicant; that is, the role could be biased towards mathematical science or modelling, simulation, experimentation and wargaming.

Academic Requirement:

A PhD in one of the following areas:
- Mathematics
- Computer Science
- Physics
- Operations Research

Other Role Specific Requirements:

Demonstrated experience, or ability, in any or all of the following areas:
- Mathematical modelling of systems;
- Developing, employing and interpreting modelling and simulation tools;
- Statistical Analysis;
- Application of Operations Research techniques to problem definition, structuring and solving;
- Undertake innovative and high quality analysis of operations and/or systems;
- Mathematical optimisation;
- Computer programming to support modelling, simulation, data capture and analysis or wargaming; and/or
- 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)

The Royal Australian Navy is currently purchasing new fleets of Patrol Boats, Frigates and Submarines. It wants to know how many of each to buy and which existing Navy bases should be used as home bases, so that it can best perform its job.

Describe what factors you would consider in addressing the problem, and which of your skills and analysis techniques you might use in order to inform your recommendations to Navy.