Position Title:	**Program Analysis Researcher**
Position Reference Number:	R&ICEWD009b/ECR014b
Division	Cyber and Electronic Warfare Division
Position Classification:	S&T3-4
Position Location:	Brisbane
Security Level:	Negative Vetting 1 minimum
Enquiries:	Graeme Smith, Graeme.Smith2@dst.defence.gov.au, (07) 3365 1625

Academic Disciplines

	Aerospace/ Aeronautical Engineering, Naval Architecture		Chemical, Radiological, Biological, Food sciences		Materials Science
x	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 Program Analysis Researcher will contribute to research, design and implementation of tool support for novel program analysis techniques aimed at providing security analyses on software deployed in military systems. They will be part of a focused research team, and exercise a high level of initiative and motivation. They will also have a good knowledge of, or strong desire to learn about, software security, formal methods, program analysis, programming language design and implementation (in particular compilers), and computer architectures.

There exist opportunities to work closely with Australian and international research partners, Defence clients and cyber security experts. The successful candidate will be supported with training in aspects of cyber security as required, and encouraged to further develop their scientific and engineering expertise.

Position Duties

Working as part of a focused research team, the Program Analysis Researcher will research, design and implement support tools for novel program analysis techniques aimed at security analyses of software systems. These techniques and tools will improve upon the state-of-the-art by increasing their precision and by covering a wider range of security vulnerabilities.

The Program Analysis Researcher will also be required to:

- Prepare publications, present outcomes, demonstrate technologies and interact with clients and stakeholders.
- Maintain up-to-date knowledge in chosen disciplines and broaden knowledge across formal methods, program analysis and cyber security and operations.
- Enhance S&T capability through collaboration with other DST Group teams, academia, industry and other research agencies.

Key attributes expected of the candidate for this position are:

1. Problem solving ability, rigor, and creativity to identify appropriate scientific and engineering solutions to demanding challenges.

2. Demonstrated ability in, or willingness to learn about, software security, formal methods, program analysis, programming language design and implementation (in particular compilers), and computer architectures.

3. Enthusiasm to participate in research and development activities that result in technology transfer that benefits Defence.

4. Ability to work within a team environment transitioning research outcomes to Defence capabilities.

5. Good interpersonal, written, and oral communication skills.

Other Requirements

Occasional domestic and international travel.

Willingness to pursue higher education particularly doctoral research in program analysis applied to security vulnerabilities.