



RESEARCH FELLOW

DEPARTMENT/UNIT	Cyber Security and Systems (CSS)
FACULTY/DIVISION	Faculty of Information Technology
CLASSIFICATION	Level A
WORK LOCATION	Clayton campus

ORGANISATIONAL CONTEXT

Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

The **Faculty of Information Technology** aims to lead global IT research and education. Our strong reputation and international profile attracts the best students worldwide and we offer a range of accredited courses that transform our graduates into highly skilled and sought after IT professionals, equipped to work globally. Our research is multi-disciplinary, multi-campus and multi-national, giving us a unique capacity to reach out further and deeper than any other institution in Australia. Our research priorities are both technically ambitious and embedded in everyday life. To learn more about the Faculty and the exciting work we do, please visit www.monash.edu/it.

About the **Cyber Security and Systems Group (CSS)**. The proliferation of mobile devices, sensors and social networks has created massive amounts of data about individuals, groups and organisations. The accessibility of this data through online computing services and communication devices has brought with it an abundance of security challenges, from privacy violations through to financial fraud and service interruptions. Supported by three of the leading research groups in Australia – the Monash Cyber Security Group, Database Systems Group and Software Systems Group – research in cyber security at Monash aims to enforce security without compromising the convenience of online services.

POSITION PURPOSE

The Level A research-only academic is expected to contribute towards the research effort of the University and to develop their research expertise through the pursuit of defined projects relevant to the particular field of research.

The project aims to develop stateful fuzzing techniques that can discover vulnerabilities that could otherwise be used for remote arbitrary execution attacks. The project will first tackle the challenges of statefulness and

protocol interference before addressing the greybox problem whereby only the compiled x86 program binary of the protocol implantation or web application is available

Reporting Line: The position reports to the area senior academic

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level A research-only academic may include:

1. The conduct of research under limited supervision either as a member of a team or, where appropriate, independently and the production or contribution to the production of conference and seminar papers and publications from that research
2. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
3. Limited administrative functions primarily connected with the area of research of the academic
4. Development of a limited amount of research-related material for teaching or other purposes with appropriate guidance from other staff
5. Occasional contributions to teaching in relation to their research project(s)
6. Experimental design and operation of advanced laboratory and technical equipment or conduct of advanced research procedures
7. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees
8. Advice within the field of the staff member's research to postgraduate students

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
 - An honours degree or higher qualifications in the relevant discipline and/or progress towards a doctorate in the relevant discipline

Knowledge and Skills

2. Demonstrated analytical and manuscript preparation skills; including a track record of refereed research publications
3. Ability to solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise
4. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines
5. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents
6. A demonstrated awareness of the principles of confidentiality, privacy and information handling
7. A demonstrated capacity to work in a collegiate manner with other staff in the workplace

8. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications and specified University software programs, with the capability and willingness to learn new packages as appropriate

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

LEGAL COMPLIANCE

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.