Position Details

CSIRO Early Research Career (CERC) Postdoctoral Fellowship – CSOF4

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| The following information is for applicants |
| Advertised Job Title | CSIRO Postdoctoral Fellowship in Cyber Security  |
| Job Reference | 69215 |
| Tenure | Specified Term of 3 years Full-time |
| Salary Range | AU$86,434 to AU$94,679 pa + up to 15.4% superannuation |
| Location(s) | Marsfield, NSW |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * Australian/New Zealand Citizens and Australian Permanent Residents
* Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible candidates)
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| Position reports to the | Group Leader – Distributed Systems Security |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Dr Surya Nepal by email: Surya.Nepal@csiro.au*Please do not email your application directly to Dr Nepal. Applications received via this method will not be considered.* |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**If you experience difficulties when applying, please email careers.online@csiro.au or call 1300 984 220. |

**Role Overview**

**CSIRO Early Research Career (CERC) Postdoctoral Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships aim to develop the next generation of future leaders of the innovation system through:

* A differentiated career development program to deliver capability excellence and breadth across all facets of the national innovation system.
* Research training via strategic research and development projects with a clear focus that will deliver real impact through science and engineering excellence;
* An innovative culture supporting the development and demonstration of original thinking and expertise leading to peer-recognition; and
* Opportunities to develop skills and experience in collaborative research teams to effectively work within national and global multi/transdisciplinary and multi-stakeholder environments.

CERC Postdoctoral Fellows **are appointed for three years or part time equivalent.**

This role offers an exciting opportunity that will help shape the effectiveness of the cyber security of critical infrastructure in Australia through applied research and development. The successful candidate will work closely with the research, industry and government participants via DATA6 's Distributed Systems Security group.

In the role of Postdoctoral Fellowship in DATA61's Distributed Systems Security group, you will focus on microarchitecture based or relevant security, side-channel attacks, and be adaptive to new emerging security areas.

The candidate will collaborate in developing a stream of research and development that contributes to high quality journal articles acceptable to high impact journals and continually seek to develop skills, experience, and research impact, with the objective of becoming a leading expert in the field.

The Research Fellow is expected to have a solid knowledge of microarchitecture and cybersecurity, conduct research both collaboratively and independently, leading to reputed international publications across microarchitecture and system security such as IEEE S&P, IEEE Micro, ACM CCS, NDSS, USENIX Security, or similar conferences and top tier transactions.

**Duties and Key Result Areas:**

* Under the direction of Distributed Systems Security group leader, carry out innovative, impactful research of strategic importance to cyber security that will, where possible, lead to novel and important scientific outcomes.
* Produce high quality scientific and/or engineering papers suitable for publication in quality journals.
* Prepare appropriate conference papers and present those at conferences.
* Provide leadership to the development of innovative concepts and ideas for further research.
* Work collaboratively with colleagues within the Data61.
* Undertake regular reviews of relevant literature and patents.
* Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of Data61's reputation.
* Adhere to the spirit and practice of CSIRO's Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

[**The CERC Postdoctoral Fellow learning and development program**](http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships)is developed between the CERC Postdoctoral Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellows’ capabilities to the level expected of an independent researcher and will include on-the-job and course-based development encompassing:

* Discipline-specific techniques and protocols
* Professional growth
* Project management
* Communication and influencing skills
* Working and collaborating with others

**Required Competencies:**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Recognise and makes immediate changes to improve performance (faster, better, lower cost, more efficiently, better quality, improved client satisfaction).
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

**Selection Criteria**

**Essential:**

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as computer science, electrical engineering, information technology or communication engineering.

***Please note:*** *To be eligible for this role you must have* ***no more than 3 years (or part time equivalent)*** *of relevant postdoctoral experience.*

1. **Proven ability to conduct high quality research, development and implementation in microarchitecture based system security and side channel attacks with publications in the top tier security conferences IEEE S&P, IEEE Micro, ACM CCS, NDSS, USENIX Security, or similar level conferences and journals in other domains.**
2. **Demonstrated experience in conducting research activities in one of the research field such as row-hammer attacks, hypervisor-based security, system security.**
3. **Experience in applying research outcomes in solving practical/industry problems, preferably in the area of cloud computing and IoT system security.**
4. **The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, plus the motivation and discipline to carry out autonomous research.**
5. A record of science innovation and creativity, plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.

**Desirable Criteria:**

1. **Experience in applying machine learning to achieve privacy.**
2. **Experience in developing security, privacy and trust solutions for distributed systems architecture and platforms.**

To be appointed as a Postdoctoral Fellow within CSIRO, candidates are required to have **submitted** their PhD at the time of commencement, as a minimum requirement, if PhD conferment has not been obtained. If a candidate has submitted, but their PhD has not yet been formally attained, the starting salary will be CSOF4-1 *($83,687).* Upon CSIRO receiving written confirmation that the PhD has been awarded (within a six-month period from commencement date), the salary will be increased to the negotiated level and the difference will be back paid to the Officer’s start date.

**Special Requirements**

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- https://ielts.com.au/

 **Our value proposition**

We want CERC Postdoc Fellows to join our world class science, engineering and digital teams to solve big, complex problems that make a real difference to the future of Australia and the world.

You'll get to work with some of the most talented minds in their fields, not just in Australia, but in the world. At CSIRO, we spark off each other, learn from each other, trust each other and collaborate closely to achieve more than we could individually.

CSIRO Early Research Career (CERC) Postdoctoral Fellow Experience Employee Value Proposition (EVP). Find out more [here](https://www.csiro.au/en/careers/postdoctoral-fellowships)!

**About Data61:**

We solve the greatest challenges through innovative science and technology.

Find out more about the CSIRO [Data61](https://www.data61.csiro.au/)