# 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 Smart Ageing |
| Job Reference | 77561 |
| Tenure | Specified Term of 3 years |
| Salary Range | AU$89,926 to AU$98,504 pa (pro-rata for part-time) + up to 15.4% superannuation |
| Location(s) | Brisbane, QLD |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | Australian/New Zealand Citizens, Australian Permanent Residents and Australian temporary residents currently residing in Australia (visa sponsorship may be provided to eligible onshore candidates) |
| Position reports to the | Team Leader |
| Client Focus – Internal | 50% |
| Client Focus – External | 50% |
| Number of Direct Reports | 1 |
| Enquire about this job | Contact Qing Zhang via email at qing.zhang@csiro.au |
| 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) Fellowships** provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant research 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 Fellows **are appointed for three years or part time equivalent.**

### The Postdoctoral Fellow will sit in the Health Internet of Things (Health IoT) team to help conceptualise, design, and develop novel algorithms and implement biomedical hardware and software engineering solutions to support older Australian to Age in Place. In this role, the postdoctoral fellow will have the opportunity to address critical health and lifestyle issues of older Australians that are presented ageing journey and be able to live independently at home through innovative research and development of analytics and technological solutions.

### The CERC Fellow will be a part of a multidisciplinary team of scientists and engineers at the Australian eHealth Research Centre (AEHRC), a joint venture between CSIRO and the Queensland Government, and will work closely with collaborators from Aged Care industry in Australia.

### Duties and Key Result Areas:

* Under the direction of senior research scientists, carry out innovative, impactful research of strategic importance to CSIRO that will, where possible, lead to novel and important scientific outcomes.
* Undertake translation of existing quality indicators for aged care provision to digital form, to enable a more efficient and integrated aged care provision.
* Contribute to the development of new science in ageing-in-place biomarkers/metrics using artificial intelligence and signal processing data gathered from technological system deployed in homes.
* Contribute towards conducting large clinical trials through sensor development and deployment for evaluation, data collection and analytics for clinical research outputs and presentation of results.
* Undertake regular reviews of literature and patents in Geriatrics and Gerontology, Internet of Things, and Data Mining/Machine Learning area.
* Capacity to undertake autonomously and in team environment research in Health, Biomedical and Engineering, Machine Learning domain, to produce high quality scientific and/or engineering manuscripts towards publication in quality journals and conferences, for client reports and granting of patents.
* Undertake an appropriate professional training and development program developed by CSIRO.
* Communicate openly, effectively, and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, often regionally dispersed research team, and business unit to carry out tasks in support of CSIRO scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Code of Conduct, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

The CERC Fellow learning, development and training programis developed between the CERC Fellow and their CSIRO supervisor. The program will focus on enhancing the Fellow’s 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. A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as Biomedical/Electrical Engineering, Computer Science, and other engineering degrees.

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

1. Expertise in signal processing and artificial intelligence using large dataset
2. High level written and oral communication skills with the ability to represent the research team effectively internally and externally, including at national and international conferences
3. A record of publications in high quality, peer reviewed journals and conferences, related to the domain of expertise.
4. Demonstrated expertise in data analytics/pattern recognition/statistical inference/signal processing.
5. Demonstrated experience of mathematical/analytical approach to address real world questions.
6. Knowledge on Statistics in clinical research and trials, Internet of Things, Sensor and Sensor Network.
7. Ability to conduct high-quality research independently and proactively, with a track record of scholarly publications in top-ranked journals and in flagship conferences.
8. The ability to work effectively in a wider multi-disciplinary team, plus the motivation and discipline to carry out autonomous research.

## **Desirable:**

1. Experience with human research methodologies, random control clinical trial.
2. Experience with mobile platform and web application development such as Flutter, Swift, Java.
3. Experience with sensor hardware prototype design and development.
4. A history of professional and respectful behaviours and attitudes in a collaborative environment.

To be appointed as a CERC Fellow within CSIRO, candidates are required to have **submitted** their doctoral thesis 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 ($AU 87,068). 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 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.

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

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

CSIRO is a values-based organisation.  In your application and at interview you will need to demonstrate behaviours aligned to our values of:

* 1. People First
	2. Further Together
	3. Making it Real
	4. Trusted

Find out more about CSIRO [Health and Biosecurity](https://www.csiro.au/en/Research/BF)