# Postdoctoral Fellowship – CSOF4

Role summary for potential applicants

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| Advertised Job Title: | Postdoctoral Fellowship in Smart Sensor and Brain Health |
| Reference Number**:** | 58385 |
| Classification**:** | CSOF4 |
| Salary Range: | AU $82,450 to AU $93,280 plus up to 15.4% superannuation |
| Location**:** | Herston, Brisbane QLD |
| Tenure: | Specified Term of 3 years |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian Citizens Only  Australian/New Zealand Citizens and Australian Permanent Residents Only   * All Candidates |
| Functional Area**:** | Research Scientist / Engineer - Postdoc |
| % Client Focus - Internal: | 50% |
| % Client Focus - External: | 50% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 1 |

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| **Role Overview:** |
| **Postdoctoral Fellowships** at CSIRO provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships will help launch their careers, provide experience that will enhance their career prospects, and facilitate the recruitment and development of potential leaders for CSIRO.  Postdoctoral Fellows **are appointed for up to three years** and will work closely with a leading Research Scientist in their respective field. They carry out innovative, impactful research of strategic importance to CSIRO with the possibility of novel and important scientific outcomes. They present the findings in appropriate publications and at conferences.  This postdoctoral fellow will join a collaborative project between the CSIRO, Mental Health program at QIMR Berghofer, UQ, and RBWH. This study focuses on the very early stage of dementia and is Australia's first younger healthy cohort selected for high risk of dementia. Prospective Imaging Study of Ageing (PISA) is a multidisciplinary platform that combines cutting-edge bioinformatics, brain imaging and lifestyle monitoring to understand the mechanisms of this devastating disease. As one of the five study cores of PISA, the current project employs smart sensing technology to achieve lifestyle monitoring in everyday life. |

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| **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. * Design and develop novel algorithms for pattern recognition, and correspond data from neuroimaging with smart sensing devices. * Examine the relationship between genetics, lifestyle factors, neuroimaging measures and risks for dementia. * Undertake regular reviews of relevant literature and patents. * Produce high quality scientific and/or engineering papers suitable for publication in quality journals, for client reports and granting of patents. * Prepare appropriate conference papers and present those at conferences as agreed with your supervisor. * Contribute to the development of innovative concepts and ideas for further research. * Make contribution to the effective functioning of the research team and help deliver CSIRO’s organisational objectives and plans. * Work collaboratively with colleagues within your team, the business unit and across CSIRO. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’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. * Undertake an appropriate training and development program developed by CSIRO. * Other duties as directed.   **CSIRO’s postdoctoral training program**is developed between the Postdoctoral Fellow and a CSIRO scientist or engineer. 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   <http://www.csiro.au/en/Careers/Student-and-graduate-programs/Postdoctoral-fellowships> |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   1. **Education/Qualifications:** A doctorate (or will shortly satisfy the requirements of a PhD) in a relevant discipline area, such as Computer Science, Electrical/Biomedical Engineering or other engineering degrees*.*   ***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. **Communication: 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.** 2. **Publications: A record of publications in quality, peer reviewed journals.** 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment.   ***Essential Criteria:***   1. Demonstrated expertise in Time Series Signal Processing, Pattern Recognition/Statistical Inference. 2. Demonstrated experience of mathematical/analytical approach to address real world questions, and ability to design efficient algorithms to explore big data. 3. Ability to conduct high-quality research independently and proactively, with a track record of scholarly publications in top-ranked journals and in flagship conferences. 4. **The ability to work effectively in a wider multi-disciplinary 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 with human research methodologies, recruitment and data collection. 2. Experience with application of data science/deep learning in clinical and/or medical research settings**.** 3. Experience with cognitive neuroscience on memory and related changes in ageing and dementia.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   **In your application and at interview you will need to demonstrate alignment with these behaviours.**  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 $82,450*.* 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. |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at <https://jobs.csiro.au/> and enter requisition number **58385**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  Please load your CV (Maximum 2MB). You may also be required to respond to some screening questions.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: Please provide contact details of two previous supervisor or academic/professional referees in your resume/CV. We will ask your permission before making contact.  **Contact:** If after reading the position details above you require more information please contact:  Dr Qing Zhangvia email: qing.zhang@csiro.au  Please do not email your application directly to Dr Zhang. Applications received via this method may not be considered by the selection panel.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.  Find out more! [CSIRO Balance](https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance)  **CSIRO Health & Biosecurity**  CSIRO Health and Biosecurity protects Australia from biosecurity problems and risks posed by serious pests and diseases, including those already in Australia and many that have the potential to cross our borders to impact the health of our farming sector, environment and people. Find out more! <https://www.csiro.au/en/Research/BF> |