# Position Details

## Research Scientist / Engineer – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Research Scientist - ASIC Design |
| Job Reference: | 60894 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Percentage of Client Focus - Internal: | 60% |
| Percentage of Client Focus - External: | 40% |
| Reports to the: | Team Leader - Microsystems |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries: | Professor Paulo de Souza: Paulo.desouza@csiro.au *Please do not email your application directly to Paulo de Souza. Applications received via this method will not be considered.* |
| Contact Details For Applying: | Call 1300 984 220 or email careers.online@csiro.au.  |
| How to Apply: | Please apply online at [jobs.csiro.au](https://jobs.csiro.au/) and enter the requisition number**.** Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’)  |

## Role Overview

CSIRO’s Data61 Business Unit is driving innovation in ASIC-design for applications in area such as implantable biosensor technology to improve health monitoring and surveillance. Our research group has active projects in the area of Cybernetics to enable miniaturised devices to operate in complex environments. As part of this research endeavour we have developed energy harvesters and micro-batteries to be further integrated with microcontrollers, communication gateways and transducers to perform reliable measurements in different environments, and deploy them in the field. We aim for our devices to be deployed as implantable devices.

The Research Scientist will work in an interdisciplinary team in designing new microscale devices under specific performance and constructive constraints. They will support the sensor deployments in the field and participate actively in the interpretation of experimental results with collaborators.

The Scientist will participate in a vibrant interdisciplinary research group and will be involved in projects addressing highly relevant research problems for Australia and beyond with impact to wide economy and society. The Scientist will be working with the Cybernetics Research Group with in the Cyber-Physical Systems Research Program.

## Duties and Key Result Areas:

* Produce quality research in the area of micro-sensing Technologies.
* Publish in high-impact journals and present results, when appropriate, in international conferences.
* Develop technology roadmaps related to micro-devices.
* Assist in the planning and preparation of research proposals, securing IP and carry out research investigations requiring originality, creativity and innovation.
* Design, simulate, assemble and test prototype models of new micro-sensor platforms.
* Write technical reports and contribute to research proposals.
* Contribute, as part of an interdisciplinary team, in the analysis of experimental results.
* Supervise graduate students, vacation scholars and industrial trainees associated to the research program.
* Recognise opportunities for innovation and generate new theoretical perspectives by pursuing new ideas and approaches and networking with scientific colleagues across a range of disciplines.
* 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.

## *Competencies:*

1. **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.**
2. **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.**
3. **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.**
4. **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
5. **Independence: Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.**
6. **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.

## Essential Criteria:

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

1. A PhD in a relevant field of research.
2. Demonstrated experience in micro-electronics.
3. Demonstrated experience in ASIC-design, particularly in the medical domain.
4. Experience in microcircuit design, modelling and simulation using SPICE, VHDL, Verilog, Simulink, Synopsys, or equivalent software packages.
5. Demonstrated experience in working with a large interdisciplinary research team.
6. Outstanding publication record of reports for industry, peer-review journal papers and patents in the area of ASIC-design.

## Desirable Criteria:

1. Experience developing software for resource-constrained embedded systems and support tools in C/C++, assembler, Python and/or other languages.
2. Knowledge and/or experience with the product development life cycle and with certification of engineering products.

## About CSIRO:

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

## About Hobart:

Hobart is Tasmania’s capital city and is located at the entrance to the Derwent River. It offers a blend of heritage, scenery and culture with world class activities and attractions. Renowned for its high quality food including its seafood it has many unique features ranging from old growth forests to world heritage areas and MONA a modern art experience. There is an active sporting community in various sports including football, cricket, trail running and rowing.