# Position Description

## Research Scientist/Engineer – CSOF5

The following information is for applicants

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| Advertised Job Title**:** | Research Scientist - Digital Tools for Perennial Horticulture |
| Job Reference: | 61694 |
| 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* [x]  All Candidates
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| Percentage of Client Focus - Internal: | 0% |
| Percentage of Client Focus - External: | 100% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |
| Name and Contact Details For Applicant Enquiries  | Everard Edwards via email: Everard.Edwards@csiro.au *Please do not email your application directly to Dr Edwards. Applications received via this method may not be considered by the selection* |
| 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’ through the ‘People Hub’ icon  |

## Role Overview:

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

The successful candidate will join a research team based at the Waite Campus of the University of Adelaide but will also collaborate with CSIRO groups in Sydney and Brisbane and industry partners based in regional South Australia. The Research Scientist will assist with the management and execution of existing projects in ‘digital viticulture’ funded by Wine Australia, including the development of sensor systems and analytical tools for yield estimation, assessment of fruit composition and to assist efficient canopy management. The role will also interact with industry partners and help to ensure the technology solutions are relevant to commercial crop management. It is anticipated that additional opportunities to apply similar technological solutions to the management of other perennial horticulture crops will also occur.

This role will involve regular field work and overnight stays away from home.

## Duties and Key Result Areas:

* Assist with the management and execution of ‘digital viticulture’ projects.
* Develop novel sensor systems and analytical tools to assist viticultural practice, including, but not limited to yield estimation, assessment of fruit composition and assessment of canopy size, structure and composition.
* Liaise with the project lead, CSIRO collaborators and industry partners to determine project requirements and take personal responsibility for implementation.
* Undertake experimental research activities and fieldwork in SA and interstate, including the supervision and training of others, to ensure experimental work is in accordance with the research design and project milestones.
* Present results in a format relevant for the audience, both industry and scientific. Prepare six-monthly reports for project funders and write scientific papers for publication.
* Draw on professional expertise, knowledge of other disciplines and research experience, and recognise opportunities for innovation by pursuing new ideas/approaches and networking with scientific colleagues across a range of disciplines
* Under limited direction, assist in the planning and preparation of research proposals and carry out research investigations, requiring originality, creativity and innovation.
* 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’s 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.

## 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 (or equivalent research experience) in agronomy, plant physiology or related discipline coupled with relevant research experience.
2. Demonstrated research experience in crop management.
3. Demonstrated experience in the field deployment or validation of proximal digital sensors such as ‘on-the-go’ imaging or continuous sensing at multiple locations, including experience of working with resulting large datasets.
4. **Strong written and oral communication skills with the ability to represent the research team effectively internally and externally** at conferences and/or stakeholder meetings**,** publish research results and prepare reports.
5. **A sound history of publication in peer reviewed journals and/or authorship of scientific papers, reports, grant applications or patents.**
6. A record of science innovation and creativity, including the ability & willingness to incorporate novel ideas and approaches into scientific investigations.
7. **A history of professional and respectful behaviours and attitudes in a collaborative environment.**

## Desirable Criteria:

1. Proven knowledge of crop management in perennial horticulture.
2. Familiarity with programming in Python, R, machine learning, computer vision, or use of remote sensing data in agriculture.
3. Demonstrated capacity to lead a project and/or team.

## Special Requirements:

Appointment to this role may be subject to conditions including security/national police/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents 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/>

The successful applicant must have the ability to conduct regular field work, which will include overnight stays away from home and hold a current driver’s license.

## About CSIRO:

We imagine. We collaborate. We innovate. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Agriculture and Food](https://www.csiro.au/en/Research/AF)