# Research Scientist/Engineer – CSOF5

Role summary for potential applicants

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| Advertised Job Title**:** | Research Scientist – Software Systems |
| Reference Number**:** | 43890 |
| Classification**:** | CSOF5 |
| Salary Range: | AU $95,369 – AU$103,205 plus up to 15.4% superannuation |
| Location**:** | Eveleigh, NSW |
| Tenure: | Indefinite |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | * All Candidates |
| Functional Area**:** | Research Scientist / Engineer |
| % Client Focus - Internal: | 20 |
| % Client Focus - External: | 40 |
| Reports to the: | Principal Research Scientist (Ingo Weber) |
| Number of Direct Reports: | 0 |

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| **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.  This position sits within the Architecture & Analytics Platform team at based Eveleigh, NSW. The Architecture and Analytics Platforms team tackles major challenges in software architecture, blockchain and distributed ledger technologies, data analytics, computing infrastructure, business process management, and dependability. The Research Scientist will lead individual research efforts, contribute to the acquisition and execution of external projects, and is expected to have a strong background, including publications at top-tier venues, in more than one of the specific research areas targeted by this team, i.e.:   * Distributed ledgers in general or Blockchain technology in particular, and applications building on those technologies * Data analytics platforms and cloud platforms * Business process management, including process mining, modelling, and execution * Enhancing dependability and security of computer systems, among others through model synthesis / discovery from execution traces and runtime verification of system behaviour * Software Architecture and Engineering |

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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. * Contribute expertise to scientific research undertaken by the Architecture & Analytics Platform team. * Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research. * Undertake regular reviews of relevant literature and patents. * Produce high quality scientific and/or engineering papers suitable for publication in quality journals and for presentation at national and international conferences. * Work effectively as part of a multi-disciplinary, often regionally dispersed research team, to undertake independent scientific investigations and carry out associated tasks under the guidance of more senior Research Scientists/Engineers. * Communicate effectively and respectfully in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Work collaboratively and honestly with internal and external colleagues, clients and partners to help define and satisfy objectives for small to medium research projects. * Assist in leading small research projects, including the negotiation of resource requirements. * Provide coaching and on-the-job training to technical staff and students to ensure experiments are established in accordance with research design. * 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. |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   * **Education/Qualifications:** A doctorate or equivalent research experience in a relevant discipline area, such as Computer Science / Engineering. * **Communication:** Strong written and oral communication skills including the ability to publish research results, prepare reports and present the results of scientific investigations at national and international conferences and stakeholder meetings. * **Behaviours: A history of professional and respectful behaviours and attitudes in a collaborative environment.**   ***Essential Criteria:***   1. Established research track record, including publications in peer reviewed, top-tier outlets. 2. Solid technical expertise in at least two of the following specific research areas.  * Distributed ledgers in general or Blockchain technology in particular, and applications; building on those technologies; * Data analytics platforms and cloud platforms; * Business process management, including process mining, modelling, and execution; * Enhancing dependability and security of computer systems, among others through model synthesis / discovery from execution traces and runtime verification of system behaviour; * Software Architecture and Engineering.  1. A record of science innovation and creativity plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations. 2. **Demonstrated ability to work effectively as part of a research team, and carry out independent individual research, to achieve organisational goals.**   **Desirable Criteria:**   1. Strong programming skills, preferably from industry or industry projects 2. Logical analysis, formal modelling 3. Architecture design and simulation 4. Business process management skills 5. Proven applications of your research, e.g., in terms of industry / community uptake of research prototypes. 6. Established collaborations (e.g., as evidenced by joint publications) with top researchers in the respective field.   **Other special requirements:**  Appointment to this role may be subject to conditions including security/medical/character clearance requirements. Applicants who are not Australian Citizens or Permanent Residents may be required to undergo additional security clearance processes; which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test).- <http://www.ielts.org/default.aspx>  ***CSIRO Values:***  As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to Excellent science, Inclusion, trust & respect, Health, safety & environment and Deliver on commitments.  In your application and at interview you will need to demonstrate alignment with these behaviours.  ***Data61 Values:***  **Great Impact**: We focus our valuable resources on areas where we can lead globally and have large impact for Australia, to aid our future prosperity and independence.  **Mastery**: We are fearless, curious and we improve every day. We strive to excel in research, technology and business, and to work with the best in the world.  **Co-Creation of Value**: Everything we do involves co-creation with our network: team, customers and partners. Generously empowering their success is central to our success.  **Ownership of Results**: We jointly hold ourselves accountable for our actions. We do this via trust and commitment.  **People and their Differences**: We embrace the creativity that comes from the diversity of our people.  **Agility and Flexibility**: We view the changing world as an opportunity. This requires agility and flexibility in everything we do; everything changes, except our constant desire to adapt.  **Tell it Straight, with Respect:**We say what we mean, mean what we say, and do not mislead, obfuscate or spin. We're direct and always respectful. |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at [www.csiro.au/careers](http://www.csiro.au/careers). You may be asked to provide additional information (online) relevant to the selection criteria. If so, then responding will enhance your application so please take the time to provide relevant succinct answers. Applicants who do not provide the information when requested may not be considered.  If you experience difficulties applying online call 1300 984 220 and someone will be able to assist you. Outside business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: If you do not already have the names and contact details of two previous supervisors or academic/ professional referees included in your resume/CV please add these before uploading your CV.  **Contact:** If after reading the selection documentation you require further information please contact:  Dr Ingo Weber via email: [Ingo.Weber@csiro.au](mailto:Ingo.Weber@csiro.au).  Please do not email your application directly to Dr Weber. Applications received via this method will not be considered**.**  **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).  **CSIRO’s** [**Data61**](https://www.data61.csiro.au/)business unit is the largest data innovation group in Australia, bringing together approximately 600 research and development staff working in digital technologies to create benefit for Australia. Data61 develops Australia's future leaders with its strong 300+ PhD student program in collaboration with our best universities across Australia.  **Our Commitment to you:** 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. We emphasise an individual’s growth and development which is supported by interacting and learning from world leading scientists and engineers, who provide the opportunity to challenge, transform and innovate new ideas. CSIRO’s Data61 is committed to sourcing the brightest and best talent to become part of the Data61 family, and contribute to creating Australia’s data driven future  More information about living in Sydney is available here: <http://www.sydney.com/sydney-life/things-to-do/5-reasons-why-you-should-move-to-sydney/>  **Our commitment to you** 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. We emphasise an individual’s growth and development which is supported by interacting and learning from world leading scientists and engineers, who provide the opportunity to challenge, transform and innovate new ideas.  CSIRO’s Data61 is committed to sourcing the brightest and best talent to become part of the Data61 family, which contributes to creating Australia’s data driven future. |