## Position Description

## Research Scientist (Team Leader) CSOF7/8

The following information is for applicants

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| Advertised Job Title**:** | Principal Research Scientist – Team Leader |
| Job Reference: | 60177 |
| Relocation Assistance**:** | Will be provided to the successful candidate if required. |
| Applications Are Open To: | All Candidates |
| Percentage of Client Focus - Internal: | 50% |
| Percentage of Client Focus - External: | 50% |
| Reports to the: | Research Group Leader |
| Number of Direct Reports: | 4-8 direct, 20-30 indirect |
| Name and Contact Details For Applicant Enquiries | Dr Guido Governatori  Email: Guido.Governatori@data61.csiro.au |
| For difficulties applying: | Call 1300 984 220 or email [careers.online@csiro.au](mailto: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 Principal 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;
* Business process management, including process mining, modelling, and execution
* Data analytics platforms
* Software Architecture and Engineering

Enhancing dependability and security of computer systems. The role of the Principal/Senior Research Scientist is to provide scientific leadership, to play a lead role in securing project funds, and to develop and pursue research agendas within the context of our vision to investigate the use of novel ICT and mathematical systems, methodologies, techniques for the creation of models of real-life phenomena, in particular in the field of extended enterprise computing comprising both inter- and intra-enterprise interactions. The modelling is target to the creation of effective and efficient software able to provide conceptually sounds model of the domain at hand and able to comply with internal and external constraints.

## Duties and Key Result Areas:

* Lead research projects, including the negotiation of resource requirements and pursue research to advance the state of the art in the broad fields of software architecture, software engineering and distributed systems.
* Produce high quality scientific and/or engineering papers suitable for publication in high quality international conferences and journals.
* Work effectively as the leader of a multi-disciplinary research team, to undertake independent scientific investigations and carry out associated tasks and contribute to management of the research group in coordination with other senior researchers.
* Drive leading research projects
* Coach and provide on-the-job training to technical staff and students.
* Outstanding open communication, 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.
* Anticipate industry and/or community needs and market direction through client liaison/networking, and identify and adapt quickly to changes.
* Within broad guidelines, use professional expertise, knowledge of other disciplines and research experience/achievement to formulate, develop and complete a research program with general direction as to the aims of their activities.
* Communicate research results to clients and the scientific community through oral and written reports, which may include the preparation of documents for patent applications.
* Provide advice to policy makers and inform and transfer knowledge to non-scientific audiences.
* Lead and supervise staff to ensure that experiments are established in accordance with the research design and are completed within the agreed timeframes and budget.
* Undertake feasibility studies, demonstrating a considerable degree of originality, creativity and innovation in solving problems and introducing new directions and approaches.
* 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.
* Supervise Research Students
* Other duties as directed.

## Competencies:

* **Teamwork and Collaboration: Creates and fosters an environment in which there is a high level of cooperation within and between teams. Facilitates positive team relationships to build interactions across Business Units and the organisation**
* **Influence and Communication: Identifies critical stakeholders and influences them via an influential third party, for example through an established network to gain support for sometimes contentious proposals/ideas.**
* **Resource Management/Leadership: CSOF7 - Provides leadership that fosters an environment that encourages new ideas and provides support for the development of emerging skills. Creates trust by displaying consistency, understanding, integrity and patience. Plans, seeks, allocates and monitors resources to achieve outcomes. . CSOF8 – Contributes to, or defines Business unit/organisational policy directions, strategic planning and operationalises the vision for staff and gains commitment to the direction chosen. Plans, seeks, allocates resources and monitors to achieve outcomes. Adopts a mentor role.**
* **Judgement and Problem Solving: Resolves major conceptual scientific, technical, commercial or management problems, which have a significant impact on the field of research, professional function, the Business Unit of the Organisation. Situations faced have little or no precedent and require original concepts and approaches.**
* **Independence: CSOF7 - Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources. CSOF8 – Commits significant resources in the face of uncertainty and takes calculated risks to improve performance and achieve challenging goals. Uses personal energy to drive change strategies. Formulates and implements contingency plans to minimise the impact of potential risks. Accepts personal responsibility for the outcomes of decisions/risks taken.**

**Adaptability: Is flexible in response to external change or when faced with external constraints. Identifies and promotes the opportunities arising as a result of change.**

## Selection Criteria:

***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.
* **Publications: A solid record of publication in quality, peer reviewed journals and conferences.**
* **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 some of the following specific research areas.

* Distributed ledgers in general or Blockchain technology in particular, and applications building on those technologies;
* Business process management, including process mining, modelling, and execution
* Data analytics platforms
* Software Architecture and Engineering
* Enhancing dependability and security of computer systems.

1. Demonstrated original contribution to science and/or engineering resulting in a significant influence on a field of research and/or its transfer to industry/community.
2. Demonstrated ability to lead 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.

**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 interviews 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.

## 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/>

## About CSIRO:

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

Find out more about the CSIRO’s [Data61](https://www.data61.csiro.au/)