

Research Computing Engineer

Position title: Research Computing Engineer

Classification:

Division/Department: Computational Biology Theme

Work location: Parkville

Position reference:

Employment type:

Remuneration range:

Further information:

Reporting to: Senior Research Computing Engineer

Closing date:

Positions reporting to this one: NA

Position overview

WEHI has made significant investments in developing state-of-the-art computational capabilities. The purpose of this role is to maximise the benefit of this investment to researchers and enable high quality, computational and data-intensive research.

As a member of the Research Computing Platform team, this role will bridge the gap between computing services and research by providing support and guidance to researchers in the use of traditional on-premises HPC, national facilities and cloud, as well as supporting the movement and management of digital data.

The role requires development of productive relationships with researchers and IT staff and will entail leading development in areas such as pipeline and pipeline tool development, data management and data movement tools, database development, machine learning pipelines, collaborative planning of hardware and software infrastructure, etc. In addition, the successful candidate will work with IT and researchers to develop policy and guide regular upgrades to our compute infrastructure.

The successful candidate will have a good understanding of computational research and the needs of researchers, good communication and interpersonal skills, and strong software engineering experience. The role will be required to build and maintain strong collaborative relationships with all stakeholders.

Organisational environment

The Walter and Eliza Hall Institute of Medical Research

The Institute is one of Australia's leading biomedical research organisations, with a strong national and international reputation for performing highly influential basic and translational research.

With more than 1,100 staff and students, the Institute is addressing some of the major health challenges of our time, with a focus on cancer, infection, inflammation, immune disorders, development and ageing. We are at the forefront of research innovation, with a strong commitment to excellence and investment in research computing, advanced technologies and developing new medicines and diagnostics. And our researchers are strongly supported by Professional Services teams.

The Institute is organised around five themes: Cancer Research and Treatments; Infection, Inflammation and Immunity; Healthy Development and Ageing; New Medicines and Advanced Technologies; and Computational Biology.

This Institute is committed to delivering long term improvements in treating and diagnosing diseases, with many national and international clinical trials underway based on research undertaken at the Institute.

The Institute's main laboratories are located in the world-renowned Parkville precinct, a vibrant and collaborative life science research, education and healthcare hub. The Walter and Eliza Hall Institute Biotechnology Centre is located 30 minutes from Parkville at La Trobe University's R&D Park in Bundoora and includes facilities for medicinal chemistry and antibody development and production. Additionally, based in Kew, the Clive and Vera Ramaciotti Laboratories (established in 1973) produce high quality, germ-free and specific pathogen free bioservices resources for research.

Organisational objectives

Discovery and translation

To make discoveries that shape contemporary scientific thinking, increase understanding and improve prevention, diagnosis and treatment of cancer, immune disorders and infectious diseases.

Education and training

To educate and train world class scientists and to attract, develop and retain the best and brightest workforce.

Organisational culture

To provide a vibrant and inspiring organisational culture that encourages, promotes and rewards excellence, collaboration, innovation, creativity and respect.

Engagement

To engage with our stakeholders to improve outcomes, building support and secure resources for medical research.

Sustainability

To build infrastructure, professional services and funding that sustains our research and maximises the time our scientists can spend making discoveries.

Organisational values

- Contribution to Society
- Integrity and Respect
- Collaboration and Teamwork
- Accountability
- Creativity
- Pursuit of excellence

Key responsibilities

Working closely with researchers

- Interact closely with researchers to identify areas of need and develop cost effective solutions
- Support researchers in solving day to day problems with their computational work
- Maintain an awareness of current and upcoming computational projects

Work closely with ITS

- Maintain a close relationship with ITS Research Services to understand their priorities and constraints
- Advocate for researchers ITS Research Services
- Advocate for ITS Research Services amongst researchers

Development of analysis infrastructure, software and porting of existing pipelines

- Where necessary, develop new analysis approaches and tools to make sense of omics and other large datasets
- Where necessary, develop parallel computing solutions to existing computational problems

Documentation and training

- Write documentation for advanced computational techniques and tools for publication on the Research Computing documentation site
- Provide one to one and classroom training for researchers

Personal development

- Maintain currency in research computing best practices and communities
- Identify opportunities to bring in-house and evangelise appropriate technologies
- Attend conferences, seminars and training

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- Maintain interest and currency in at least one area of research at WEHI

Key selection criteria

Essential

- A postgraduate degree in a computationally intense discipline or equivalent experience in research or research support.
- Experience with or ability to quickly learn core research and High-Performance Computing technologies such as R, C++, Python, Linux/Unix Operating System, Containers and web services
- Ability to learn complex concepts across multiple domains and demonstrate that to a domain-specific audience.
- Good problem solving skills.
- Comfortable with a continuous-improvement culture, including being open, honest, and identifying mistakes so that they can be corrected as soon as possible.
- Excellent communication and stakeholder skills, including the ability to communicate across academic disciplines.
- Highly collaborative by default with an ability to leverage skills and knowledge outside an organisation and translate those skills into benefiting the organisation.

Desirable

- Research experience in data-intensive or computationally intensive Life Science areas.
- Experience with cloud providers, such as AWS, Google

A safe and sustainable workplace

The Institute is committed to developing a safe and sustainable work place with rigorous risk, compliance and governance systems. As an employee you are expected to:

- Comply with Institute policies, plans and procedures.
- Take reasonable care of your own safety and the safety of others including using Personal Protective Equipment (PPE) and safety devices appropriately.
- Report all risks, hazards, incidents/injuries and near misses.
- Attend and complete training programs as documented in individual training needs matrices, within proposed time frame.
- To the extent of your role responsibilities and obligations proactively contribute to a safe and sustainable workplace.

Diversity

At the Walter and Eliza Hall Institute we embrace diversity amongst our staff and students and know the importance of an inclusive workplace culture to the success of our organisation.

We are actively committed to achieving gender equality across our workforce. The institute has a range of policies and initiatives in place to address under-representation of women at senior levels and to support people with caring responsibilities.

We have a strong commitment to the process of reconciliation and creating meaningful employment and training opportunities for Aboriginal and Torres Strait Islander Peoples.

We encourage applications from people from culturally and linguistically diverse backgrounds, Aboriginal and Torres Strait Islander Peoples, people with a disability, and people from the LGBTQIA+ community.

Privacy notification

The collection and handling of declarations and personal information relevant to your employment will be consistent with the requirements of the Privacy Act 1988.

Acceptance

I, have read, understood and agree that this position description represents the key duties and responsibilities expected of me while employed in this position. I will also undertake other duties assigned to me from time to time. I understand the Walter and Eliza Hall Institute of Medical Research reserves the right to modify this position description, as required, and I will be consulted when this occurs.

**) If e-signature is used:*

I consent to providing my electronic signature below in confirmation that I have read, understood and accept the duties and responsibilities described this position description.

Employee Signature: Date: