

Position Description

Research Officer in multi-species malaria modelling

Position No:	NEW
Business Unit:	School of Computing, Engineering and Mathematical Sciences
Division:	Office of the Provost
Department:	Mathematical and Physical Sciences
Classification Level:	Level A Research Only
Employment Type:	1.0 FTE
Campus Location:	Bundoora
Other Benefits:	http://www.latrobe.edu.au/jobs/working/benefits

Further information about:

La Trobe University - <http://www.latrobe.edu.au/about>

Position Context/Purpose

The Research Fellow, funded through a National Health and Medical Research Council (NHMRC) Ideas Grant, will take a leadership role in the development of a novel multi-species malaria computational transmission model and calibration of the model to data from malaria-endemic regions.

At La Trobe, The Research Fellow will be a member of the Department of Mathematical and Physical Sciences (School of Computing, Engineering and Mathematical Sciences), reporting to Dr Rebecca Chisholm. They will work closely with the Ideas Grant investigator team, led by Dr Angela Devine (Menzies School of Health Research) and Dr David Price (The University of Melbourne), and associated research higher degree student(s) to appropriately incorporate into the model interactions between malaria species, and integrate costs and quality of life data for the economic evaluation of interventions, based on statistical and economic principles.

The appointee will have completed or be in the process of completing a PhD in applied mathematics, computer science, statistics or a related discipline. Ideally, they will have prior knowledge of infectious disease modelling and Bayesian inference methods. They will have a developing research profile, with a demonstrated ability to publish scientific findings in the peer-reviewed literature.

Duties at this level will include:

- Conduct and publish, or otherwise disseminate high quality and/or high impact research/scholarly activities under limited supervision either independently or as part of a team.
- Participate in professional activities including presentations at conferences and seminars in field of expertise.
- Provide advice within the field of the employee's research to Honours and postgraduate students.
- Attendance at meetings associated with research or the work of the unit to which the research is connected and/or at Departmental or School meetings and/or membership of a limited number of committees.

Under the guidance and support of the grant investigators, the appointee will:

- Lead development, simulation and analysis of the multi-species malaria model, with appropriate integration of intervention costs and required outcomes for model-based cost effectiveness and resource allocation analyses
- Lead calibration of the model to epidemiologic data from Indonesia and PNG using state-of-the-art Bayesian inference methods to quantify cross-species interactions
- Lead a simulation study of the impact of potential interventions to address country-specific public health questions
- Follow best practice for coding conventions and code documentation
- Contribute to the organisation and running of policy workshops with in-country partners

Essential Criteria

Skills and knowledge required for the position

- Completion (or near completion) of a PhD in applied mathematics, computer science, statistics, modelling and simulation, or a related discipline.
- Evidence of experience in research and evaluation and the ability to work effectively under limited supervision or independently.
- A record of contribution to publications, conference papers and/or reports, or professional or technical contributions which provide evidence of research potential.
- Effective oral and written communication skills, including the ability to interact effectively with people from a diverse range of backgrounds.

- Demonstrated ability to work as a member of a team in a cooperative and collegial manner.
- Experience in at least one of the following topics: mathematical biology, mathematical modelling, agent-based modelling, Bayesian inference, optimisation
- Demonstrated ability to use modelling and statistical computing programs and languages such as Python and R
- Demonstrated ability to work in multidisciplinary research or teaching teams

Capabilities required to be successful in the position

- Ability to work collaboratively, recognise the value of diversity and model accountability, connectedness, innovation and care.
- Ability to demonstrate self-awareness, see things from another person's perspective and actively seek out and act on feedback to improve knowledge, skills and behaviour.
- Ability to enable a safe, inclusive, high-performing team culture, prioritising staff mental health and wellbeing.
- Ability to build a culture of continuous improvement, implementing ideas generated by team members.

Essential Compliance Requirements

To hold this La Trobe University position the occupant must:

- hold, or be willing to undertake and pass, a Victorian Working With Children Check; AND
- take personal accountability to comply with all University policies, procedures and legislative or regulatory obligations; including but not limited to TEQSA and the Higher Education Threshold Standards.

Other Information

The position description is indicative of the initial expectation of the role and subject to changes to University goals and priorities, activities or focus of the job.

Position Flexibility

La Trobe University is committed to providing a diverse, inclusive and respectful working environment for all staff. We offer flexible work arrangements that can assist you in balancing your work and other responsibilities.

Why La Trobe:

- Develop your career at an innovative, global university where you'll collaborate with community and industry to create impact.
- Enjoy working on our inspiring and stunning campuses – the perfect hub for industry, students and academics
- Help transform the lives of students, partners and communities now and in the future

This is more than just a job. Working at La Trobe offers opportunities to demonstrate excellence and transform lives.

Here, you'll join exceptional people, partners and communities, who power our operations with ambition and purpose.

We are forward-looking and culturally inclusive. We continuously review, improve and transform our processes to embrace new, flexible approaches. That means you'll always have the opportunity to succeed and make a difference.

La Trobe's Cultural Qualities:



We are accountable

*We strive for excellence in everything we do.
We hold each other and ourselves to
account, and work to the highest standard.*



We are connected

*We connect to the world outside – the
students and communities we serve, both
locally and globally*



We are innovative

*We tackle the big issues of our time to
transform the lives of our students and
society.*



We care

*We care about what we do and why we do it.
We believe in the power of education and
research to transform lives and global
society. We care about being the difference
in the lives of our students and communities*

For Human Resource Use Only

Initials:

Date: