

Position Description

Research Fellow 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 B 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 as a member of a team or independently and produce conference/seminar papers and publications from that research.
- Engage and build relationships with industry and community to ensure that all research results are communicated and adopted by industry, community and/or government.
- Co-supervise or, where appropriate supervise Higher Degree by Research (HDR) postgraduate students as required.
- Contribute to the activities of the department and school, as agreed with the supervisor and as consistent with the requirements of any external contracts relating to funding of the position.

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 of a PhD or equivalent qualifications or research experience in applied mathematics, computer science, modelling and simulation, or a related discipline.
- A record of publications, conference papers and/or reports, or professional or technical contributions which provide evidence of strong research potential.
- Sound analytical skills with an ability to communicate complex information clearly both orally and in writing.
- High level organisational skills: the ability to set priorities, meet deadlines, initiate and follow-up actions, all with minimal or no supervision.

- Demonstrated ability to work collaboratively and productively with staff and students from a diverse range of backgrounds.
- Ability to liaise effectively with a range of collaborators nationally and/or internationally and with industry partners.
- 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

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

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.

Our success can be attributed to its strong sense of community. We have a long-standing commitment to diversity, inclusion and social justice; we are committed to providing a workplace where all staff feel valued, respected and supported to achieve their full potential. We strive to build a workplace where all employees of diverse backgrounds, abilities, experiences, sexuality, gender, religion and age are welcome, valued, respected and one that is representative of our community. We demonstrate our cultural qualities by holding ourselves accountable and creating a culture of trust and innovation while genuinely caring for one another.

La Trobe's Cultural Qualities:

WE ARE CONNECTED



We are **connected** to each other and the communities around us. We engage with those communities to learn from our past, inform our present and impact our future.

WE ARE INNOVATIVE



We are **innovative** in tackling the most important issues of our time. We are inquisitive and seek to develop new ideas that positively impact the way we work and the world around us.

WE ARE ACCOUNTABLE



We are **accountable** for what we do and share a commitment to excellence. We are courageous and respectful in the way we hold ourselves and each other to account.

WE CARE



We **care** about what we do and value the power of education and research. We care about each other and strive to create a safe and inclusive community.

For Human Resource Use Only

Initials: Date: