

PhD Scholarship Opportunity at Massey University

Assessing Sustainable Construction Using Mātauranga Māori Led Approaches

We are looking for a PhD student who is passionate about realizing more environmentally sustainable building construction in Aotearoa, drawing on the wisdom that comes from mātauranga Māori. You will be developing models to measure and communicate the carbon footprint of alternative future buildings that are designed using Construction 4.0 ideas – employing the latest complex system data management science to realise construction optimisation. The research will build on existing work undertaken at Massey University and the Building Research Association of New Zealand (BRANZ) to measure the carbon footprint of construction materials and processes. We will be taking it to the next level by integrating it into Construction 4.0 data-based digitally integrated design concepts optimised for environmental impact, manufacturability, constructability and reuse – and incorporating mātauranga Māori interfaces.

Our aim is to work with you, in our role as kaitiaki (guardians) of te ao (the world), to address climate change and support transforming the construction industry into an inclusive, negative carbon economy. This research is part of a larger project funded by the MBIE Endeavour programme, titled “Construction 4.0 transformation of Aotearoa New Zealand’s construction sector”.

If successful, you’ll work with a multidisciplinary international expert team of researchers who will develop 4.0 data-based digitally integrated design concepts optimised for environmental impact, manufacturability, constructability and reuse.

Details of the scholarship

The scholarship will include full payment of fees to study for a PhD (three years), and a PhD stipend (\$35,000 per year for three years).

Who can apply?

We invite applications from those with a first degree in environmental science, engineering, and/or data science. We are looking for someone who can demonstrate an ability to constructively engage with researchers from different disciplines and realise the significant opportunities associated with working in a transdisciplinary research team. We particularly invite applications from those who identify as Māori in descent.

The successful applicant will enjoy collecting and managing data, and synthesising it to communicate results that are meaningful to stakeholders. At the same time, s/he will be able to engage with the underlying methodological issues associated with environmental footprinting that determine the relevance (or not) of modelling results. S/he will proactively engage with mātauranga Māori and how its insights can support realisation of the next generation of construction in Aotearoa New Zealand.

If you are interested or want further details, please get in touch with Professor Sarah McLaren. To apply please send a cover letter and CV to Professor Sarah McLaren (s.mclaren@massey.ac.nz). Applications close on the 19th May 2023.