



University of Tasmania PhD Students

will present

Breaking New Ground

in the Meeting Room, QVMAG at Inveresk

1.30 pm Sunday 28th October 2018

Admission: \$6 General Public,

\$4 QVMAG Friends, members of Launceston Historical Society and Students

Free for members of The Royal Society of Tasmania

Beyond infant growth charts: Time to measure the body composition of infants?

Manoja Herath's project is part of a multi-country study funded by the Gates Foundation, and managed by the International Atomic Energy Agency. Due to the increase in chronic diseases, and the first 1000 days of life being considered as the foundation for later life, there is interest in setting reference standards for body composition in addition to the current length and weight standards. The focus of Manoja's study is to assess the effect of gestational diabetes on the body composition of infants.



Mapping the extremes: underwater robots and ice shelves

Erica Spain's research involves combining acoustic data from both ships and Autonomous Underwater Vehicles (AUVs) to investigate key seafloor features. She aims to quantify uncertainty and error in acoustic data and to minimise their effects to build better seafloor maps. Through the Antarctic Gateway Partnership, Erica is working with Tasmania's new AUV, *nupiri muka*, to apply these techniques in remote, extreme places.



Torpedo Teamwork: Marine Robots Working Together

Fletcher Thompson is working on improving the control of marine robots, which is particularly prone to error when multiple vehicles are being operated together. He will present some of his work on using Artificial Intelligence to plan missions for multiple marine robots, and a future where robots explore the world's oceans around the clock with minimal human instruction.



Respiratory probiotics: A new way to fight respiratory tract infections?

Brianna Atto is studying the protective benefit of non-harmful throat bacteria against a troublesome pathogen Non-typeable *Haemophilus influenzae* which causes persistent and recurrent infections in the upper and lower respiratory tract. This work has become particularly important given the rapid development of antibiotic resistance, making treatment and prevention of such infections difficult.

