



Open PhD Position in Geochemistry / Earth Science / Climate

Title

An investigation of climate dynamics at the End-Permian mass extinction

Chief Supervisor

Dr. Terry Isson (University of Waikato – Tauranga)

Co-supervisor(s) for this project

Professor Lidya Tarhan (Yale University)
Professor Noah Planavsky (Yale University)
Dr. William Foster (Universität Hamburg)
Professor Nicholas Tosca (University of Cambridge)

Description

The global carbon and silica cycles regulates climate on Earth. Yet we have a limited understanding of the feedbacks that lead to both stability and runaway climate Earth states. The end-Permian extinction—the only event in Earth’s history with similar-to-modern carbon release rates—offers a unique opportunity to investigate ecosystem-climate feedbacks. Records suggest the development of lethally hot temperatures and sluggish climate recovery during the end-Permian mass extinction event. The mechanisms responsible for, and relative timing of these perturbation remain, however, poorly understood. Reconstruction of climate-carbon cycling-extinction dynamics for the end-Permian may yield critical insights into not only the largest mass extinction in Earth’s history but also other episodes of rapid warming—past, present and future. As part of this project, the PhD student will execute a combination of field work in Svalbard, mineralogical and Li isotope analysis, and box modelling in collaboration with a well-rounded supervisory team. Work for this project will be carried out at Yale, Cambridge and the University of Waikato (Tauranga). This project will constitute only a portion of the student’s PhD thesis, there is room for the candidate to lead the way in shaping the remainder of the thesis.

Prior experience

Prior experience in any of the following fields: isotope (or other) geochemistry, geology, global biogeochemical cycling, box modelling, carbon cycling is highly valued.

As part of your application package, kindly include:

1. CV (including 2-3 referee information)
2. Cover Letter (this can include: a description of why you want to undertake a PhD; how your previous experiences have prepared you for the research project that you are applying for; what your passions are within or outside of academia)

Applications will be accepted until the position is filled (31st Sept 2021)

Kindly email your application to: terry.isson@waikato.ac.nz