

Job Title: Junior Research Fellow (Assist Lect) Dept of Oceanography

JUNIOR RESEARCH FELLOW: MARINE ISOTOPE BIOGEOCHEMISTRY

(Full-time 5-year contract)

Marine Biogeochemistry Lab, Department of Oceanography

FACULTY OF SCIENCE

The Marine Biogeochemistry Lab (www.uct-mbl.co.za) in the Department of Oceanography at the University of Cape Town (UCT) invites applications for the position of **Junior Research Fellow: Marine Isotope Biogeochemistry** (full-time 5-year contract). The Marine Biogeochemistry Lab is a world-class oceanic and atmospheric biogeochemistry laboratory established to address large- and small-scale research questions in marine and climate science. The laboratory is equipped with cutting-edge infrastructure, much of it unique on the African continent, that is available to support high-quality, high-visibility, and high-impact research. A central focus of the Marine Biogeochemistry Lab is high-sensitivity measurements of the nitrogen and oxygen isotopes of various nitrogen species, allowing for investigation of the marine nitrogen cycle, which is fundamental to understanding how our oceans work and are changing.

We seek a Junior Research Fellow with experience in analytical marine biogeochemistry and isotope geochemistry to play a leading role in new interdisciplinary research projects in the Marine Biogeochemistry Lab. The incumbent will work on questions of nitrogen cycling and its implications for ocean productivity, ecosystem health, and greenhouse gas budgets in the equatorial, subtropical, and coastal ocean. They will be expected to design and conduct at-sea experiments to quantify rates of important biogeochemical processes, including under low-oxygen and low-nutrient conditions, and to analyse a range of biogeochemical parameters in the laboratory, including the nitrogen and oxygen isotope ratios of various dissolved and particulate nitrogen species. The incumbent will also be expected to develop an independent but complementary research stream (e.g., the application of 'omics techniques) that augments the vision and capabilities of the Marine Biogeochemistry Lab. The Junior Research Fellow will play an integral role in large, collaborative research projects, including contributing to the supervision of students embedded in the project and participating in international project meetings and conferences. They will also have an opportunity to contribute to undergraduate and Honours teaching in Oceanography. The incumbent will be appointed in the Department of Oceanography and affiliated with UCT's Marine and Antarctic Research centre for Innovation and Sustainability (MARIS), which promotes and manages large inter- and transdisciplinary marine research projects.

REQUIREMENTS:

- PhD in a relevant field (e.g., marine biogeochemistry, oceanography, environmental/Earth science, chemistry).
- At least two years of relevant postdoctoral experience
- Experience conducting experiments and collecting samples at sea
- Strong background in experimental design and proficiency in applying analytical techniques related to marine biogeochemistry
- Experience with isotope ratio mass spectrometry and the calibration and interpretation of isotope data
- Experience working in low-oxygen and/or low-nutrient environments
- A track record of conference presentations and publications in peer-reviewed journals
- Demonstrated ability to collaborate on research projects
- Experience mentoring students in a research setting
- Excellent interpersonal, planning, and organisational skills

THE FOLLOWING WOULD BE ADVANTAGEOUS:

- Experience using the denitrifier method to measure nitrogen isotopes
- Experience conducting research using complementary techniques such as marine 'omics
- Experience in phytoplankton culturing techniques and designing laboratory-based culture studies
- Multiple first-author publications in international peer-reviewed journals

RESPONSIBILITIES:

- Design and conduct field-based marine biogeochemistry research, including on research cruises, that contributes to research project deliverables.
- Analyse a range of biogeochemical parameters in the laboratory, including the nitrogen and oxygen isotope ratios of dissolved and particulate nitrogen species via isotope ratio mass spectrometry.
- Contribute to methods development, to improve and/or augment ongoing efforts in the Marine Biogeochemistry Lab.
- Contribute to project logistics and annual reporting.
- Participate in project meetings and other collaborative activities including workshops and summer schools.
- Develop an independent, complementary research stream to augment the vision and capabilities of the Marine Biogeochemistry Lab.
- Prepare and publish research findings in internationally recognised, peer-reviewed journals.
- (Co-)supervise and mentor postgraduate students.
- Present research at national and international conferences.
- Contribute to grant writing to secure funding for future projects.
- Maintain excellent planning and organisational skills to ensure efficient research project execution.

The annual cost of employment, including benefits is between R 599 810 and R 831 153

To apply, please visit the UCT Jobs Site (www.jobs.uct.ac.za). **View** (For Internal Applicants) and **View** (For external applicants) to create a candidate profile and to submit your application.

Please complete/attach the following to your profile before submitting your application:

- Curriculum Vitae (CV).
- Motivation/Cover letter that speaks to the specific requirements of the position.
- A brief proposal (not exceeding two pages) of the research stream that you would develop to augment the vision and capabilities of the UCT Marine Biogeochemistry Lab
- Three referee names which must include their title and name, position details, relationship to you, their e-mail address and telephone number.

Shortlisted candidates may be required to undergo competency assessments and pre-placement-medical placements. References may be requested by UCT at any stage of the selection process.

Any enquiries for the position to be addressed to Ms Natasha Khan at Natasha.Khan@uct.ac.za or 021650 3469

Closing date: 12 May 2025

UCT is a designated employer and is committed to the pursuit of excellence, diversity, and redress in achieving its equity targets in accordance with the Employment Equity Plan of the

University and its Employment Equity goals and targets. Preference will be given to candidates from the under-represented Designated Groups. Our Employment Equity Policy is available at www.uct.ac.za/downloads/uct.ac.za/about/policies/eepolicy.pdf.

UCT reserves the right not to appoint.