

Fully-funded 4-year PhD position: Tracking Neogene growth and collapse of the West Antarctic Ice Sheet (WAIS) by detrital provenance analysis of clastic sediment.

The School of Earth Sciences at University College Dublin (UCD), Ireland, seeks to fill a fully-funded 4-year PhD position supervised by Dr. Chris Mark and Prof. Stephen Daly. The position is funded by a Science Foundation Ireland Starting Investigator Research Grant, carries a tax-free stipend of €18,500 p.a. plus EU fees, and includes ample funding for analytical work and conference attendance. Antarctic fieldwork is not envisaged.

Project description: Changes in the WAIS, which is highly climate-sensitive because much of the ice base is below sea level, are proposed to control major (20-60 m amplitude) global sea level changes during the Neogene. Sea level changes of this magnitude have profound implications for the future of human coastal settlement, yet the response of the WAIS to geologically abrupt temperature changes remains poorly resolved. This project aims to track the response of the WAIS to documented changes in Neogene global climate, using a suite of detrital provenance techniques. These will be applied to marine sediment deposited on the West Antarctic continental margin, accessed from drill cores recovered by the Integrated Ocean Drilling Program (IODP) and predecessor drilling programs. Analytical work will be conducted at the Irish National Centre for Isotope Geoscience (NCIG) at UCD. The successful candidate will join both the NCIG research team as part of the Geochronology, Petrology & Isotope Geochemistry Group headed by Prof. Stephen Daly, and also the Irish Centre for Research in Applied Geosciences (iCRAG). In addition to conducting original research, the candidate will benefit from the UCD Structured PhD Programme, which offers a range of professional development and transferable skills training.

Eligibility: Candidates must hold at least a BSc honours degree (or equivalent) in Geology or a related discipline at upper second (2.1) level, and be eligible to pay EU postgraduate student fees in Ireland. UK residents registering for postgraduate degrees prior to September 2019 remain eligible to pay EU fees for the full duration of their course of study. Fee eligibility can be verified at www.ucd.ie/students/fees/eu_flowchart1.html. Excellent spoken and written English skills are essential. Prior research experience with LA-ICPMS and/or detrital provenance analysis is advantageous, but not required.

Application: Applicants should send a CV and cover letter (each limited to two A4 pages), plus contact details for two referees, to Dr. Chris Mark (chris.mark@ucd.ie) by 17:00 on February 28th 2019 (GMT). Shortlisted candidates will be notified to arrange Skype interviews. Shortlisted non-native English speakers who have not completed an English-language degree must provide evidence of English proficiency: see www.ucd.ie/international/study-at-ucd-global/ucdenglishlanguage requirements/ for further details. It is intended that the successful candidate will take up the position on or shortly after 1st May 2019.

Informal enquiries prior to application are most welcome and should be directed to chris.mark@ucd.ie.

Useful links:

NCIG: www.ucd.ie/earthsciences/research/nationalcentreforisotopegeochemistry/

UCD School of Earth Sciences: www.ucd.ie/earthsciences/about/

Science Foundation Ireland: www.sfi.ie

iCRAG: www.icrag-centre.org/