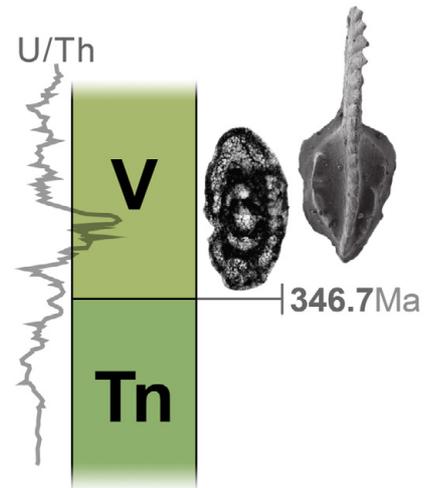


Fully funded PhD Scholarship:

## Correlating the Tournaisian-Viséan boundary in Ireland

**Project Description:** The Carboniferous (358.9-298.9Ma) witnessed profound changes in the Earth System, most notably significant palaeoclimatic fluctuations associated with the onset of the Late Paleozoic Ice Age, along with palaeo-oceanographical and tectonic events stimulated by the final stages of assembly of the Pangean supercontinent. Ireland has an extensive rock record from this time interval and is an excellent location for Carboniferous research.

This study will use a multi-proxy approach to precisely correlate the Tournaisian-Viséan [Tn-V] boundary (located within the Carboniferous at 346.7Ma) across several regions in Ireland. Previous work has shown that this multidisciplinary approach is capable of accurately correlating deep-water sections spanning the Tn-V boundary in Western Europe. A range of tools, including biostratigraphy, carbonate microfacies analysis and gamma-ray spectrometry, will be employed, with field data collection at a number of sites in Ireland. The primary objective is to test the effectiveness of this type of correlation in a more diverse range of sedimentological settings and palaeoenvironments in Ireland, and also where definitive biostratigraphic markers may be lacking. The evolutionary trends of several microfossil groups (principally foraminifera and conodonts) across the Tn-V boundary interval will also be investigated.



The Tn-V boundary interval was, itself, very significant: it saw the demise of extensive Waulsortian carbonate mudbanks and the tectonic reorganisation of Tournaisian carbonate ramp environments into a series of basins and intervening platform highs. It is thus of considerable interest in mineral exploration. The successful candidate will receive training in a diverse array of geoscientific techniques and collaborate with an international team of Carboniferous experts in order to better understand this important time interval.

**Requirements:** The successful candidate should:

- hold (or anticipate) a first-class or upper second-class honours degree (or equivalent) or MSc (taught or research) in geoscience, or related disciplines
- be highly self-motivated and willing to work in a team
- display excellent written and oral communication skills
- have some background experience, or interest, in Carboniferous research (including palaeontology and stratigraphy)

Additionally, a full driving licence would help with field data collection, but is not essential.

**Award:** The project is fully funded by the SFI Research Centre in Applied Geosciences (iCRAG) and the successful candidate will enrol for a 48-month Structured PhD programme in Earth and Ocean Sciences at NUI Galway. The Fellowship provides University fees and a stipend of **€18,500** per annum over four years. Funds for project costs are also provided.

**Further Information:** Dr John Murray ([john.murray@nuigalway.ie](mailto:john.murray@nuigalway.ie))

**Application Procedure:** Please submit an electronic copy of CV with contact details for two referees and a letter stating your interest and suitability for the position to: [john.murray@nuigalway.ie](mailto:john.murray@nuigalway.ie)

**Closing date for applications:** 26<sup>th</sup> August 2022

**Project start date:** November 2022