**PhD Scholarship Advertisement**

Fully Funded PhD Scholarship: Assessing marine benthic heatwaves using Essential Ocean Variables

School of Natural Sciences (Earth and Ocean Sciences)

Application(s) are invited from suitably qualified candidates for full-time (Irish Marine Institute) funded PhD scholarship(s) starting Feb-April, 2025 affiliated to the School of Natural Sciences at the University of Galway.

**University of Galway**

Located in the vibrant cultural city of Galway in the west of Ireland, the University of Galway has a distinguished reputation for teaching and [research excellence](https://www.universityofgalway.ie/our-research/)

For information on moving to Ireland please see [www.euraxess.ie](http://www.euraxess.ie)

**Detailed Project Description:** The PhD student will be the central figure in evaluating the use of relatively low-cost seabed platforms, deployed in a strategic array in Irish waters, as an environmental monitoring tool for marine spatial planning. Landers will be developed through knowledge gained from an existing low-cost platform delivery system (LanderPick), in collaboration with the LanderPick research group in IEO-Spain, with whom the successful researcher will spend time early in the PhD. An array of landers will be used to monitor Essential Ocean variables (EOVs) at strategic locations at the Irish continental margin and shelf waters, including SACs where natural and anthropogenic environmental impacts require expert assessment. Data collected will inform the oceanographic processes causing extreme temperature changes (Marine Heat Waves - MHWs) and the connection of surface to deep water changes. The landers will also measure bottom currents and elucidate pressing science questions on the role of the continental margin currents (e.g. European Slope Current) in modulating the magnitude and the regional variability/connectivity of these changes.

The researcher will be based between the MI and UoG and work will involve;

1. Assessment and design of the lander (and array) for multipurpose measurements including an extended research visit to IEO – Spain to the LanderPick research group to acquire essential skills in the use and operation of the lander system.
2. Analysis of data from current, and future, deployments of an Irish Array (ISLA) to assess benthic environmental conditions, continental margin currents, and other subsidiary biological observations (e.g. from camera systems at SACs)
3. Analysis of marine heatwaves in Irish waters from existing (and collected) data (field and re-analysis), led by the research group at Maynooth University (Dr. G McCarthy) – again involving time spent in the research group.

Research details will be tailored to the strengths of the successful candidate, but the foundations of the research are as detailed above. The successful candidate will have an interest and knowledge in marine measurement technology and environmental/climate issues within the Irish marine realm. They will have strong and demonstrable numerical and data handling skills, as well as an appreciation of marine technology and observing systems for ocean measurements. The researcher will work towards producing scientific output that will support government actions to fulfil environmental and marine spatial planning legislation requirements.

**Living allowance (Stipend):** €25,000 per annum, [tax-exempt scholarship award]

**University fees**: €6,000 per annum

**Start date**: Earliest convenience in 2025, no later than April 2025.

* **Academic Entry Requirements:** A master’s degree or first-class honours B.Sc. in a relevant discipline (e.g. Oceanographic/Marine science, Applied computational science or similar), with a good foundation in marine hydrodynamics and interest in marine technology.
* Experience with field monitoring, data collection and demonstrable skill in statistical and large data analysis (inc. data manipulation skills (e.g. R, Matlab etc.).

**To Apply for the Scholarship:** Please email an introduction letter and current CV, indicating your research experience, and names of two referees, to Dr. Martin White martin.white@universityofgalway.ie with subject line ‘Cullen Ph.D. Application’.

**Contact Name:** Dr. Martin White

**Contact Email:** martin.white@universityofgalway.ie

**Application Deadline:** 03/01/2025 , 16:00 Irish Time

**Primary Supervisor name**: Dr, Martin White (with Dr. Glenn Nolan (Marine Institute)