

PHD OPPORTUNITY FOR A CULLEN SCHOLARSHIP IN WAVE MODELLING

The Irish Climate Analysis and Research Units (ICARUS) at the Department of Geography, Maynooth University are seeking to recruit a PhD student in the area of physical oceanography and climate. The student will work as part of the DeWaPic project jointly with Maynooth University and the Marine Institute.

The DeWaPic (Decadal wave prediction for the Irish coast) project will investigate the coastal wave impacts on Irish coasts on the decadal and climatological scale with the aim of establishing a framework of models, based on the existing framework available at the Marine Institute, and develop a new coastal impact model for the Irish coastal zone.

Project title: Decadal wave prediction for the Irish coast (Supervisors: Dr André Düsterhus , Maynooth University; Gerard McCarthy, Maynooth University and Dr Tomasz Dabrowski, Marine Ireland)

DeWaPic will connect climate model output with a chain of models (WMA, SWAN) to statistically and dynamically downscale them to the seas around Ireland. Furthermore, the aim is to create a wave model for the SURF zone to investigate the coastal impact under different scenarios of sea-level and climatological change. The aim is to generate statistical information on how waves will change on time-scales from years to multiple decades around the Irish coast.

The candidate will work with Dr André Düsterhus and Dr Gerard McCarthy in the research group in physical oceanography and climate at ICARUS, Maynooth University, and with Dr Tomasz Dabrowski at the Marine Institute. The position will be associated within the wider group funded by the Marine Institute for the A4 project involving Trinity College Dublin and the Hamilton Institute in Maynooth University. The student will also work closely with international partners and large computing facilities around Europe.

All applicants must have

- Relevant 2:1 degree (or higher) in Oceanography, Meteorology, Geoscience, Physics, Mathematics, Computer Science, Statistics, or similar qualification
- Excellent programming skills in at least one programming language (preferably Fortran) and one script language (R or Python)
- Experience in numerical and statistical methods will be of advantage
- Excellent written and verbal communication and presentation skills in English

The studentship is for 48 months and include a tax free stipend of €16,000 p.a. and the payment of academic fees up to a maximum of €6,000 per annum, as well as a computer and travel allowance.

Application Procedure: send a curriculum vitae and a cover letter to andre.duesterhus@mu.ie with **DeWaPic PHD** in the subject line (deadline: 15/01/2021, 1 pm GMT).