



## **MARINE INSTITUTE**

### **CULLEN FELLOWSHIP OPPORTUNITY - PHD**

**Ocean Colour and dynamics in the Eastern Atlantic from Satellite observations  
(OCEANS)**

#### **Background**

The goal of this project is to characterise the spatio-temporal trends in ocean colour and their relationship with selected key surface ocean circulation patterns around Ireland by analysis of a combination of satellite derived observations. This will include development of an ocean colour climatology for case 1 waters around Ireland, using data from existing satellite derived products, but optimised using in situ observations and tailored time compositing approaches to minimise cloud cover effects. Additional satellite data, including sea surface height from radar altimetry and sea surface temperature from thermal sensors will be integrated with the ocean colour data for greater insight into relationships between circulation and surface features. The viability of existing and planned Earth Observation (EO) data sources for continuing such work on an operational basis will be determined.

This work provides much needed and valuable information on ocean colour and circulation in Case 1 waters within the region of the currently designated Irish continental shelf, as well as future proofing the development of operational products by evaluating the role EO and ground reference information can play in Irish ocean sensing. Attention will also be focused on the launch of new sensors, such as the ESA Sentinels, and their potential for developing capacity in ocean remote sensing within Ireland, and the work will significantly further the international body of knowledge on spatio-temporal analysis of ocean data to better evaluate the relationships between circulation and surface features.

#### **Requirements**

Applicants should have a minimum of a 2:1 Honours undergraduate degree in a marine science discipline or equivalent, and an MSc. Experience in remote sensing, computational techniques and programming would be an advantage.

#### **Award**

The position is a joint award between the Marine Institute and the Geography Department, University College Cork (UCC) commencing on or near 1<sup>st</sup> October 2015. The studentship comprises an annual stipend of €22,000, from which university fees (approximately €6,000 per year for EU students) will have to be paid.

The student will be registered with the UCC Geography Department and will spend the first year in Cork followed by 2 years in Galway with the Marine Institute. The PhD student will work under the academic supervision of Dr. Fiona Cawkwell in UCC with a co-supervisor in the Marine Institute. This project will benefit from the operational and research strengths of the Marine Institute and the Earth Observation Research Group at UCC.

#### **Further Information/Applications**

Dr. Fiona Cawkwell, Department of Geography, UCC. e-mail: [f.cawkwell@ucc.ie](mailto:f.cawkwell@ucc.ie), telephone: +353 (0)21 490 2707

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**Application Procedure**

Applicants should send a copy of their CV, with the names and addresses of 3 referees, plus a statement outlining their academic experience and skillset applicable to this position, and their reasons for wishing to undertake this research project to Fiona Cawkwell ([f.cawkwell@ucc.ie](mailto:f.cawkwell@ucc.ie)).

**Closing date**

5pm Wednesday 15<sup>th</sup> July 2015 with interviews to be held on Monday 20<sup>th</sup> July 2015