

## **PhD Fellowship Position in Remote sensing of Ocean Color**

A 3-year PhD fellowship is proposed by the Laboratory of Oceanology and Geosciences LOG (Wimereux, France) on the validation of ocean color products from OLCI/S3 and COCTS/CZI/HY-1C and their potential to monitor the dynamic and the quality of the European and Chinese coastal waters.

### **Objectives**

The monitoring of the coastal water quality at large spatial and temporal scales is mandatory in the frame of the EU “Marine Strategy” directive. One tool to do that is remote sensing. Remote sensing has the advantage to provide a synoptic view of the oceans. In the goal of defining the quality of the coastal waters, the study of the spatial and temporal variation of the ocean color is a powerful tool that provides information about the chlorophyll-a concentration, the total suspended matter concentration and the absorption and back-scattering properties of the seawater. The Chinese and European space agencies have launched dedicated satellites to study the ocean color. However, before being able to use these satellites images to monitor the coastal waters, it is necessary to validate the different processing steps of those images using in-situ measurements. Two steps are necessary: 1) Atmospheric correction, step that removes the influence of the atmosphere on the signal measured by the satellite; 2) Bio-optical and biogeochemical algorithms, estimating information on the chlorophyll-a, total suspended matter and bio-optical properties of seawater. An in-situ dataset of bio-optical and biogeochemical parameters in the European and Chinese coastal waters will be developed to validate these two steps and will also be used to develop regional algorithms in our regions of interest. This will allow us to select the best algorithm for those areas. Those best algorithms will be used to process the total archive of the European and Chinese satellite images in order to study the temporal variations of the European and Chinese coastal seawater quality.

This fellowship is part of a project funded by the European Space Agency in the frame of the Dragon-5 program. The candidate will collaborate with Dr. Bing Han and his team at the National Ocean Technology Center (NOTC; Hangzhou, China) and will be able to visit NOTC for short-term missions.

**Qualifications:** Master degree in remote sensing or oceanography or environmental sciences

**Application closure date:** June 1<sup>st</sup> 2022

**Position Length:** 3-year fellowship from October 2022

**Location:** The candidate will be located at LOG, 32 avenue Foch, 62930 Wimereux, France

**Conditions to apply:** The applicant must hold the nationality of a Member/participating states or of the European Space Agency (Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland and the United Kingdom)

**Applicants must submit:**

- A detailed CV, including the e-mail and phone number for three references
- A short cover letter explaining the applicant's experience related to the position and motivation

**For questions and application's submission, please contact:**

Cédric Jamet: [cedric.jamet@univ-littoral.fr](mailto:cedric.jamet@univ-littoral.fr)