

Marie Skłodowska-Curie Individual Fellowship Opportunities at IOCAG

The Instituto de Oceanografía y Cambio Global (Institute of Oceanography and Global Change), IOCAG, is a research institute that belongs to the University of Las Palmas de Gran Canaria (ULPGC). IOCAG arises to structure and coordinate a number of consolidated and interdisciplinary research groups of ULPGC. It is intended to assess the ocean's role in the climate change, while investigating how this change affects the planet in the singular marine and coastal ecosystems.

IOCAG is seeking candidates to develop funding applications within the Individual Fellowships call (Marie Skłodowska-Curie Actions, MSCA). If the proposals are successful, the research fellows will work on the following topics:

- **Carbon remineralization in the dark ocean: Reconciling biogeochemical rate estimates and ecological measurements**
Supervisor: Prof. Javier Arístegui-Ruiz

Job description: One of the main reasons of the poor constraintment of mesopelagic carbon remineralisation in ocean carbon budgets is the discrepancy between ecological and biogeochemical rate estimates, constituting one of the major challenges in order to address the potential role of the deep ocean in sequestering carbon at centennial scales. Here we propose a study combining laboratory experiments and fieldwork to address the variability in oxygen consumption rates, microbial carbon demand and carbon budgets in the Canary Current, an Eastern Boundary Region with large coastal-open ocean gradients in productivity and lateral advection of organic matter.

Requirements: Proficiency/fluency in English language (including writing) and fieldwork experience in biological/physical oceanography. Matlab user.

- **Characterization of eco-anthropic aspects of the Canary Islands' beach-dunes systems as a key for their sustainable management**
Supervisor: Ph.D. Luis Hernández-Calvento

Job description: Urban development associated with tourism, as well as some equipment and services, and the development of certain activities carried out by users, have generated remarkable transformations in sedimentary systems. In this line, some of the latest research emphasize a topic that has not been studied until now, regarding the beach-dune systems of the Canary Islands: the arid climatic conditions in which they occur induce greater natural fragility that similar systems have in other regions of the planet (temperate or tropical). The aim of this project is to characterize some natural processes typical of these environments, analyze

the influence of human activity on them, diagnose their condition, and guide future management based on scientific criteria.

Requirements: Excellent English language skills and previous experience in alteration (or disturbance) of coastal processes by human activities.

- **Seasonal Variability of the AMOC: The Canary Current**
Supervisor: Prof. Alonso Hernández-Guerra

Job Description: In the proposal, we hypothesize that the seasonal cycle of the Canary Current (CC) and the Canary deep Poleward Undercurrent (CdPU) altogether explains most of the seasonal variability of the eastern component of the AMOC as measured by the RAPID array. We will also address the importance of the meridional pressure gradient between the Mediterranean Outflow Waters and the Antarctic Intermediate Waters to contribute to the seasonal behaviour of the AMOC. To verify the proposed hypothesis the approach will be mainly observational, carrying out four 12-days cruises and extending a long-term mooring first deployed in 1997. The analysis will be complemented with the analysis of historical data in the area, altimeter data, and data from the Argo ocean Observing network. Data from publically available model simulation will be used to investigate the role of the wind forcing in the developing of the CdPU.

Requirements: At least B2 in English language and some experience in Physical Oceanography.

- **The role of zooplankton and micronekton in the ocean carbon flux. Abundance, biomass and ecophysiology of diel vertical migrants**
Supervisor: Prof. Santiago Hernández-León

Job description: In this topic, IOCAG is seeking a research fellow to work in the fields of biological oceanography and ecophysiology of zooplankton and micronekton. The research fellow will join a research group in ecophysiology of zooplankton and micronekton areas. The research will focus on the role of zooplankton and micronekton in the active flux in the ocean. The candidate is expected to work in experiments related to feeding, growth and metabolism, as well as related enzymatic activities.

Requirements: Proficiency/fluency in English language (including writing) and fieldwork experience in biological oceanography are mandatory.

- **Study of the Vertical Oceanic Pump in mesoscale eddies**
Supervisor: Dr. Pablo Sangrà Inciarte



Job description: This project will study the dynamics/kinematics of the ageostrophic secondary circulation (ASC) and mixing in surface mesoscale anticyclonic eddies and how they modulate plankton activity, plankton community structure, and accumulation and downward transport of organic matter (the Vertical Oceanic Pump, VOP). The physical and biogeochemical observations and processes will be combined and correlated to derive a conceptual model of the dynamics of the marine system linked to the VOP in mesoscale eddies.

Requirements: Research experience in mesoscale and submesoscale variability, coupled physical-biological processes and excellent skills on programming languages.

If you are interested in submitting a proposal, please send us your CV and your motivation letter by e-mail (gestor_iocag@ulpgc.es).

The researcher and the supervisor of each topic must develop jointly the proposals, which will be submitted to the topics of the Individual Fellowships (MSCA): European Fellowships (IF-EF) and Global Fellowships (IF-GF).

MSCA-IF Requirements

- The researcher must be in possession of a doctoral degree or have at least four years of full-time equivalent research experience.
- The researcher must currently be residing outside Spain.
- The researcher can be of any nationality (including Spanish).
- 12 or 24 months projects.

Job Details

- Temporary Contract
- Full-time (40 hours/week)

Contact details

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