Institut de Ciències del Mar

Pg. Marítim de la Barceloneta, 37-49
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www.icm.csic.es

Job Offer

Postdoctoral Position in Deep-Sea Ecological Modelling

The Institut de Ciències del Mar (ICM) of the Spanish National Research Council (CSIC) is the most multidisciplinary research institute on marine science in Spain, and the leading scientific organization in Southern Europe. It is also the first marine science research centre to be accredited as a **Severo Ochoa Centre of Excellence**, a recognition to the institution's leadership in the field of marine research in Spain and to its commitment to create social impact.

Our goal is to develop **research of excellence** to inspire a society in harmony with the blue planet, in line with the values of the **United Nations Decade of Ocean Science for Sustainable Development (2021-2030)**. For further information, please visit the our website.

The role and the team

We invite applications for a Postdoctoral Researcher position in environmental, climate and ecological modelling, as part of the MacroHolos and AbyScapes projects, led by Drs Erik Simon-Lledó, Ariadna Mecho (Barcelona Supercomputing Centre), and Morane Clavel-Henry (GEOMAR), among other partners from Germany, UK, Austria and Finland. The research will investigate the mechanisms driving benthic biodiversity in abyssal seascapes, particularly across the northeast Pacific region.The candidate will lead the characterisation of environmental (i.e., physical and biogeochemical) conditions and particle dispersal in the benthic boundary layer. Combining this data with existing biodiversity databases, the candidate will lead the development of joint ecological models to quantify the role of abiotic and biotic filtering processes in regulating large-scale abyssal community assembly, and forecast how these relationships might change with climate change or seabed mining. The candidate will join the Functioning and Vulnerability of Marine Ecosystems group at ICM-CSIC: https://www.icm.csic.es/en/research-group/functioning-and-vulnerability-marine-ecosystems.
The position involves close collaboration with the Barcelona Supercomputing Centre (BSC) and includes international secondments in leading European research institutes.

Job description

The successful candidate will be involved in:

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- Processing global oceanographic data (e.g. WOA, Copernicus) and CMIP6/CMIP7 Earth System Model outputs (historical and under different Shared Socioeconomic Pathways) to generate a high-resolution environmental characterisation of the abyssal benthic boundary layer (BBL)
- Potentially running Lagrangian larval particle dispersal simulations using OpenDrift
- Development and implementation of Hierarchical Modelling of Species Communities (e.g. HMSC) to analyse biodiversity-environment-disturbance relationships and simulate community responses in abyssal seascapes
- Producing open-access environmental and biological databases and high-impact scientific publications
- Collaborating with international partners and contributing to multi-institutional research outputs and meetings

Requirements

Professional experience

- Experience in ecological modelling, oceanography, environmental sciences, statistical computing or a related discipline (PhD in any of this fields is desirable but not required)
- Strong publication track record in international scientific journals
- Demonstrated experience in ecological or oceanographic data analysis
- Proficiency in **R**, **Python**, **Shell script**, or **MATLAB**
- Experience working with CMIP products or hydrographic data analysis is desirable
- Familiarity with joint community and predictive ecological modelling is a strong asset

Languages

Fluent in English (written and spoken). Catalan or Spanish is an asset

Competences and skills

- Strong analytical and quantitative skills
- Excellent data management, scientific writing and presenting ability
- Capacity to work independently and proactively within an international team
- Commitment to collaborative research and openness to multidisciplinary approaches

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The offer

We are offering a contract with the following conditions:

- **Estimated annual gross salary**: 34.000€ consistent with CSIC pay scales.
- **Working time:** Full-time contract with flexible working hours and possibility of teleworking up to 3 days a week. Read more about work-life balance here.
- **Target starting date**: March 2026
- **Duration**: 2 years, with possibility of extension

The CSIC and all its research centres were awarded with the "HR Excellence in Research" seal in 2021. This recognition reflects our commitment to continuously improve our human resources policies in line with the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

Recruitment at ICM is open, transparent and merit-based, and all applicants compete on the same terms.

Interested candidates should send a cover letter (1 page max) and a CV to:

esimon@icm.csic.es

Candidatures will be reviewed upon reception, and first round of interviews will start in late January 2026
