Cutting-edge Research for a Changing World

Scientist in Marine Ecosystems and Digital Innovation

Reference code: 50141616_2 – 2025/KS 3
Commencement date: as soon as possible
Work location: Geesthacht
Application deadline: June 18th, 2025

The applicant will work in the frame of the EU Research and Innovation Action projects such as "New Copernicus Capability for Trophic Ocean Networks (NECCTON)" aiming to develop new ocean modelling products to predict and protect the biodiversity of marine ecosystems. It will illustrate their application within Digital Ocean Twins by fostering innovation and collaboration across various disciplines and domains. In the advertised position, focus of the modelling will be on coupled hydrodynamical-wind waves and sediment modelling. This work will contribute to the development of Digital Ocean Twins fostering innovation and collaboration across various disciplines and domains. Our initiative will showcase the application of diverse Digital Ocean Twin frameworks and demonstrate the capabilities of digital ocean twins through selected case studies in the sector of offshore industries. This will improve the understanding of intricate marine systems, considering their physical, biological, ecological, and economic determinants, aiding in informed policymaking.

Equal opportunity is an important part of our personnel policy. We would therefore strongly encourage qualified women to apply for the position. In principle, the full time position (39 h/week) is also sharable.

The position is in collaboration with the Modelling for Aquatic Systems research group (MAST) at the ULiège University in Belgium.

At Hereon, there is a long-standing experience in the development of coupled hydrodynamic-windwaves modeling specifically for the coastal ocean and estuarine domain while ULiège has a long experience in the modelling of biogeochemistry and coupling with the physics. The new position builds on successful recent modelling scientific developments and thus offers the best prospects for a career in earth system and climate sciences as well as in the rapidly growing fields of Digital Ocean Twins and multiuse of resources.

Your tasks

We are looking for a motivated and eager-to-learn ocean scientist with good programming skills. The applicant will use coupled modelling frameworks of the ocean including hydrodynamics, wind waves, biogeochemistry and suspended sediment dynamics, developed at Hereon and ULiège (biogeochemistry) to setup cross-sectorial scenario simulations including climate scenarios and multiuse scenarios. A special endeavor is to forward the parametrization of vertical mixing, sediment dynamics and the coupling with biogeochemistry in the water column and to use state-of-the-art tools for model-data integration making use of remote sensing products. The applicant will be trained by our team in state-of-the-art tools and will proceed in close cooperation with the project partners from all over Europe. The position offers an excellent opportunity for an application-oriented entry into Digital Twins initiative, whereby the work within the framework of the EU horizon mission ocean project contributes directly to the goals of the European Green Deal Initiative.

Your profile

- a Master's Degree and PhD in (ocean) modelling, (e.g. ocean physics, biogeochemistry, meteorology)
- a capacity and interest to work in different fields of marine science including physics, biogeochemistry, ecological processes, environmental engineering
- talent for computational scientific work is necessary
- very good written and verbal English communication skills are required
- good communication skills for communicating results to different audience including general public in relation to dissemination activities

We offer you

- an exciting and varied job in a research centre with around 1,000 employees from more than 60 nations
- a well-connected research campus (public transport bus) and best networking opportunities
- individual opportunities for further training
- social benefits according to the collective agreement of the public service and remuneration up to pay group 13 according to TV EntgO Bund
- an excellent technical infrastructure and modern workplace equipment
- 6 weeks of holiday per year; company holidays between Christmas and New Year's Day
- very good compatibility of private and professional life; offers of mobile and flexible work
- family-friendly company policy with childcare facilities, e.g. nursery close to the company
- free assistance program for employees (EAP)
- corporate benefits
- a varied offer in the canteen on campus

ULiège is strongly committed to promoting equality and diversity, and is labelled HRS4R for Human Resources 'Excellence in Research Award' for institutions (**https://euraxess.ec.europa.eu/jobs/hrs4r**).

Severely disabled persons and those equaling severely disabled persons who are equally suitable for the position will be considered preferentially within the framework of legal requirements.

Helmholtz-Zentrum hereon

Helmholtz-Zentrum Hereon
The Helmholtz-Zentrum Hereon conducts cutting-edge international research for a changing world: Around 1,000 employees contribute to the tackling of climate change, the sustainable use of the world's coastal systems and the resource-compatible enhancement of the quality of life. From fundamental research to practical applications, the interdisciplinary research spectrum covers a unique range.

Institute of Coastal Systems Analysis and Modeling
The Institute for Coastal Systems Analysis and Modeling studies the dynamics of coastal systems as part of the Earth system and develops prediction methods and future scenarios for coastal systems. One focus of our research is the study of coastal ecosystems, which are subject to increasing pressure to change due to climate change, use of coastal environments, and other human drivers.

Interested?
Then we are looking forward to receiving your comprehensive application documents (cover letter, CV, transcripts, certificates, etc.) indicating the reference number 2025/KS 3 until June 18th, 2025.

Apply now

Zertifikat seit 2008
audit berufundfamilie

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Für Diversity in der Arbeitswelt

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