

**How to apply :**

Send your cover letter and detailed resume with the following reference 2022-08/OO/HPC2 to [recruitment@mercator-ocean.fr](mailto:recruitment@mercator-ocean.fr)

**Deadline for applications:** 15/09/2022

**Date of publication :** 02/08/2022

**About the job :**

You will join the Operational Engineering department, in the Operational Oceanography department of Mercator Ocean and you will collaborate with the development teams.

You will be responsible for porting and optimising the codes that make up the operational production systems on the dedicated computing platforms and in particular for the future Ocean's Digital Twin. You will also be responsible for monitoring new technologies, new computers or computing centres. Finally, you will be involved in R&D projects on the evolution and optimisation of computer tools for ocean analysis and forecasting on future computing platforms using HPC, GPU, CLOUD and Machine Learning technologies.

In this context, you will be more specifically in charge of :

- Contribute to the development of codes developed internally and in collaboration with external teams in the context of research and development projects.
- Improving the quality and performance of these codes, particularly with regard to optimisation strategies for Operational Oceanography applications.
- Prototype innovative technical solutions in order to develop ocean analysis and forecasting models in new operational contexts (e.g. development of an Ocean's Digital Twin).

**Assets for success:**

You have a Master's degree or an engineering degree with professional experience (or doctoral thesis) in the field of high performance computing.

You are keen to work in a team on ambitious and collaborative scientific and technical projects. You can provide technical support to your colleagues in a scientific environment and with a variety of profiles. You are particularly rigorous and organised, you are curious, dynamic and reactive.

You are strongly interested in environmental sciences and oceanography and in the development of computer applications in a complex and varied operational environment including high performance computing centres and CLOUD technology.

We are looking for candidates :

- Knowledge of the architecture and operation of computing centres including supercomputers, storage and archiving systems, services and nodes based on cloud-native technologies.
- Familiar with scientific computing languages (Python and Fortran) and methods of optimising numerical models including algorithmics, compilation, profiling, containerisation, massive parallelization, use and optimisation of code on GPUs, use of Artificial Intelligence application development environments.
- Being familiar with software engineering and collaborative development methods (GIT/SVN including CI/CD with GITLAB and/or Jenkins)
- Knowledge of physics, environmental physics or oceanography would be an additional asset
- Fluent in written and spoken English

**Who are we?**

Mercator Ocean International has been developing operational oceanography activities for nearly 25 years, as part of its public interest mission to preserve the ocean.

Many scientific and societal challenges must be met to ensure a sustainable ocean, whether they concern the environment, biodiversity, climate change, the blue economy or education. To meet these challenges, Mercator Ocean designs, develops, operates and maintains state-of-the-art digital systems capable of describing, analysing and forecasting the state of the ocean in 3D, continuously and in real time. The scientific information is then translated to be accessible to all, whether they are public or commercial services, political decision makers, industrialists, associations, NGOs, teachers or citizens. Mercator Ocean International thus combines scientific excellence and social commitment on a daily basis.

As a non-profit company under multinational governance (ES, FR, GB, IT, NO), we work in a climate of trust with our ten shareholder partners, all key players in the development of European oceanography.

**MERCATOR OCEAN**

INTERNATIONAL

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