

NEFELI KLEOPATRA VENETSIANOU



Bioinformatician (IMBBC - HCMR), PhD Candidate

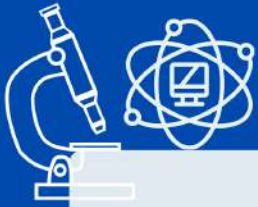
Field: Bioinformatics, Data Analysis,
Machine Learning and Genomics

Everything around us is biology, and the rapid growth of technology and biological data has made bioinformatics an essential field. It helps scientists process and analyze complex biological information while contributing to environmental protection through species monitoring, detection of environmental changes, and support for biodiversity conservation and informed decision-making.

Key challenge

Limited funding and infrastructure, which restrict access to powerful computing systems and data storage. Additionally, the lack of well-designed, standardized pipelines makes analyzing large biological datasets slower, less reliable, and harder to reproduce.





AIGLI PEYRET



Marine Physicist, Research Assistant (IO - HCMR)

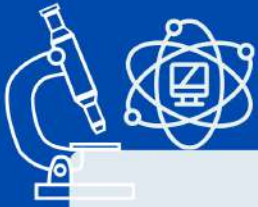
Field: Climate variability through remote sensing and ocean simulation models

My field, like all areas of marine research, is important for predicting future climate conditions and monitoring ecological impacts. What makes it especially fascinating is how marine biology, geology, chemistry, and physics are all interconnected and influence one another.

Key challenge

Lack of access to global data from international sources in the research field.





FRANCESCO FABIANO



**PhD Candidate (DiSTeM - UNIPA, Stazione
Zoologica Anton Dohrn)**

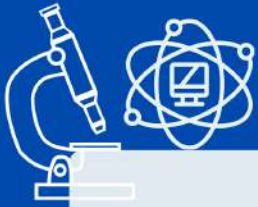
Field: Micobial Ecology, Biotechnology and
 Bioinformatics

The importance of microbial ecology lies in understanding bacterial communities and discovering specific strains that possess invaluable potential for environmental applications (e.g., the removal of hydrocarbons and heavy metals).

Key challenge

Isolating strains from extreme environments (such as deep waters or extremely cold habitats). These bacteria require specific conditions to grow properly, which are not easy to replicate in the laboratory.





RAPHAEL GKIKAS



Biologist, Research Assistant (IO - HCMR)

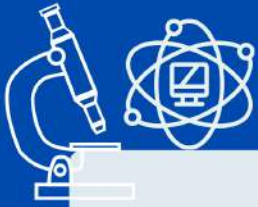
Field: Marine Ecology and Fisheries,
with focus on invasive species

Invasive species are rapidly changing marine ecosystems, especially in the Mediterranean Sea. By studying how these species spread and interact with native marine life, we can better understand their ecological impacts and help develop strategies to protect biodiversity, fisheries, and coastal ecosystems.

Key challenge

The use of different methodologies and sampling approaches can make it difficult to compare results between studies and regions. Developing unified sampling protocols is essential for monitoring invasive species, tracking their spread across marine ecosystems, and reducing their impacts.





EIRINI KAGIAMPAKI



Chemist, Laboratory Technician (IMBBC - HCMR)

Field: Bioanalysis, Biotechnology and
Environmental Microbiology

I find this field important because it helps uncover useful applications from natural products derived from marine organisms and microorganisms, while bioanalysis allows us to measure biomolecules that reveal how marine life functions and interacts with its environment.

Key challenge

Optimizing extraction and analysis methods to reliably detect target molecules, as well as the difficulty of cultivating microbes from extreme environments and efficiently extracting their DNA.

