

# Biology of deep-sea microorganisms

**Anaïs Cario**, ICMCB (France), [anais.cario@icmcb.cnrs.fr](mailto:anais.cario@icmcb.cnrs.fr)

**Mohamed Jebbar**, LM2E (France), [mohamed.jebbar@univ-brest.fr](mailto:mohamed.jebbar@univ-brest.fr)

**Christian Tamburini**, MIO (France), [christian.tamburini@mio.osupytheas.fr](mailto:christian.tamburini@mio.osupytheas.fr)

A majority of Earth's prokaryotes reside in the deep marine biosphere i.e. abyssal plains, cold seeps, marine sediments, oceanic crust, water column, deep-sea vents, brines as well as in the deepest part of the ocean, the hadal. Little is known about how inherent elevated pressures drive both the diversity and the activities of deep-sea microbial communities. The main reasons rely on technical challenges to reach and investigate this remoted biosphere. New tools and methodologies are in development due to the need to better understand this unexplored biosphere to fill in knowledge gaps related to the deep-sea microbes' lifestyle and their key role in the global cycles.

This session aims at gathering interdisciplinary fields of research with a strong interest to deep-sea microbiology such as microbial ecology, host-microbiomes, biogeochemistry, microbial physiology, ocean sciences, biophysics, bioinformatics, high-pressure engineering, etc.

We encourage submissions focusing on recent progresses for: (i) investigating deep-sea biodiversity and deep marine ecosystems activities, (ii) understanding the adaptive mechanisms of deep-sea microbes, (iii) developing advanced technical approaches (lab scale, on-field, -omics, etc.) for the access and the study of deep-sea environments.