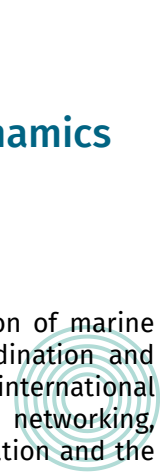




Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute

# VACANCY

## Researcher microbial community dynamics



### SITUATION

For 20 years, the Flanders Marine Institute (VLIZ) has been strengthening the accumulation of marine knowledge and the excellence of marine scientific research in Flanders. VLIZ is a coordination and information platform, a focal point for marine and coastal research, which also serves as an international contact point for marine science. Important activities are national and international networking, information and data management, scientific communication for policy and industry, education and the general public, and logistical support of marine research. Since 2017, the institute also initiates, promotes and executes innovative and multidisciplinary marine research, and this at the service of, in collaboration with or complementary to Flemish and international marine research groups.

To strengthen its research capacity, VLIZ is hiring 14 new colleagues in its Research Department. Join our multidisciplinary team in Oostende at the Belgian coast and be part of a new wave of marine research in Flanders. You will work in a unique institute in which your science will be supported by state-of-the-art data systems and services, research infrastructure, science communication and an extensive marine library. Moreover, VLIZ is part of a wide network of Belgian and international marine research groups, offering many opportunities for scientific collaboration.

In addition to these open positions, VLIZ sets up a recruitment reserve for potential temporary jobs. Opportunities may arise for the following profiles: ecological modeler, environmental data analyst/modeler with experience in R, marine biologist/taxonomist, molecular ecologist, marine geologist. Candidates with such a profile are encouraged to make a spontaneous application.

*For each function, VLIZ considers enthusiastic involvement, open servitude, excellent professionalism and integrity as important characteristics.*

### RESEARCHER MICROBIAL COMMUNITY DYNAMICS

Due the short generation time of bacteria, algae, protozoa and archaea, the microbial community composition can respond sensitively to abrupt changes in the environment (e.g. heatwaves, storm floods, sewage discharge). Rapid changes in the microbial community composition may increase the presence of undesirable organisms such as pathogens and harmful algae. To study these short-term changes in the microbial composition, smart in situ measuring systems need to be developed.

VLIZ currently owns a number of sensors, e.g. CytoSense flowcytometer (FCM), Fast Repetition Rate Fluorometer (FRRF), Marine Autonomous Plankton Sampler (MAPS), which – if adapted – are suited for this intended use. By investing in the optimization, automatization and integration of these sensors, we aim to develop an in situ detection method that can be linked to the VLIZ robotics or VLIZ buoy.

The first phase of this project will mainly focus on flow cytometry. Automated binning algorithms will need to be developed to detect changes in the microbial community composition through cytometric fingerprinting of phytoplankton and heterotrophic bacteria. These algorithms will ultimately result in the development of a warning system, which will enable us to take responsive actions or sample when required, e.g. by activating the MAPS.



By combining these measuring and sampling devices, we will generate opportunities for innovative fundamental microbial research. By coupling quantitative biomass assessments and community composition patterns (FCM) to in situ measurements of primary production (FRRF) and genetic diversity (MAPS), the ecosystem processes (e.g. carbon stocks, carbon fluxes) of the Belgian Part of the North Sea will be studied on a whole new level.

*To develop this research, VLIZ hires a post-doctoral researcher in the Research Department.*

## MAIN RESPONSIBILITIES

- To build a research line on the (automated) detection and study of microbial dynamics;
- To plan and perform research projects with internal funds;
- To write high quality research papers in peer-reviewed scientific journals
- To write proposals and to prospect for external funding (in collaboration with the head of the research unit and/or relevant colleagues within and outside the institute) to initiate new research projects on marine microbiology;
- To possibly contribute to research and innovation projects in collaboration with partners from the Blue Economy;
- To supervise MSc and PhD students;
- To contribute to other research projects in the VLIZ research department, to interact and collaborate with colleagues at VLIZ to increase interdisciplinarity in various projects, to give advice on colleagues' research;
- To collaborate with colleagues from the research infrastructure division and marine robotics centre for the technical aspects of sensor integration;
- To discuss planning and to report progress to the head of the research unit;
- To network at national and international level with other (marine) scientists;
- To present research at national and international conferences;
- To contribute to events organized by the Department or the Institute, such as the VLIZ Marine Science Day.

## PROFILE

- PhD in applied biological sciences or life sciences, or equivalent through experience;
- Demonstrable experience with flow cytometry and flow cytometric data processing;
- Experience with cytometric binning algorithms is a plus;
- Strong affinity for microbial ecology (phytoplankton and/or marine microbial research);
- Experience with sampling and sample processing for genetic analysis is a plus;
- Experience with programming in Matlab, R, or Python is a plus;
- Sufficient technical knowledge to understand the working principles of sensors and their components;
- Good written and oral English communication skills;
- Critical and creative;
- Scientifically integer;
- Strong interpersonal skills, a motivated team player;
- Open minded and taking initiative;
- Documented project writing skills;
- Experience with project management is a plus;
- Documented strong academic track record.

## ADDITIONAL INFORMATION

For more information concerning this vacancy, please contact:

- Maarten De Rijcke, head of the research unit Life's Roots & Rates
  - Mail: [maarten.derijcke@vliz.be](mailto:maarten.derijcke@vliz.be)
  - Telephone: +32 (0)59 34 14 15
- Michiel Vandegehuchte, Research Director VLIZ
  - Mail: [michiel.vandegehuchte@vliz.be](mailto:michiel.vandegehuchte@vliz.be)
  - Telephone: +32 (0)471 61 22 49

## OUR OFFER

- We offer a challenging job in the dynamic environment of VLIZ
- A contract of three years as post-doc researcher, which can be followed by a tenure track position in case of a positive evaluation, or a contract in a tenure track position, depending on your profile and qualifications. The salary follows the salary scales of scientific personnel in the Flemish Government.
- Fringe benefits: holiday pay, end-of-year bonus, meal vouchers, hospitalization insurance, bike allowance, free public transport for home-work commuting and an attractive holiday arrangement



## DOES THIS VACANCY APPEAL TO YOU?

Send in your cover letter and CV until May 15<sup>th</sup> 2019 (23:00 CEST):

- By post: Jan Mees, General director VLIZ, InnovOcean site, Wandelaarkaai 7, 8400 Oostende
- By mail: [jobs@vliz.be](mailto:jobs@vliz.be) with subject "02 LRR - Vacancy Microbial Dynamics"

Contact us by telephone on +32 (0)59 34 21 30.

*VLIZ promotes equality and diversity in the workplace. You will be recruited based on competencies. Qualities of people are decisive, regardless of gender, religion, ethnic origin, age, sexual orientation or any disability.*

## PROCEDURE

Based on the received motivation letters and CVs, a select group of candidates will be invited for a job interview. You will be informed by email. The job interviews take place in the offices of VLIZ.

Employment can start immediately after the selection procedure and ideally not later than 1<sup>st</sup> October 2019.

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