**Job Description**

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| **Position/role:** | **Scientific computing engineer in oceanography** |
| **Job-type:** | **E2E47 - Scientific computing engineer** |
| **Category:**<br>**Corps:**<br>**BAP:** | **A**<br>**Ingénieur d'études (IGE)**<br>**E – Informatique, Statistiques et Calcul scientifique** |

*The requirements for the job may evolve according to practice and operation-dependent needs.*

## Introduction to Sorbonne University (parent organisation)

Sorbonne University (French: *Sorbonne Université*) is a multi-disciplinary research university established by the merger in 2018 of Paris-Sorbonne University and Pierre et Marie Curie University.
It employs 6,700 professors, research professor and researchers and 4,900 library, administrative, technical, social and health staff. Its budget is 675 M€.

Sorbonne University is headquartered in the heart of Paris, and extends its presence to more than twenty sites in the Île-de-France region. The three faculties of humanities, science & engineering and medicine have a wide-ranging autonomy in implementing the university's strategy based on a contract on shared objectives and means. University governance is primarily dedicated to promoting the university's strategy, steering, developing partnerships and diversifying resources.

The Faculty of Science and Engineering is composed of 79 research laboratories, 22 departments and 6 education and research units in chemistry, engineering, mathematics, physics, biology, earth environment and biodiversity. It also includes the *École polytechnique universitaire*, the *Institut d'astrophysique de Paris* and the *Institut Henri Poincaré* as well as 4 observatories of the sciences of the universe (Roscoff, Banyuls et Villefranche-sur-Mer, ECCE-TERRA).

It has about 21,000 students, including 2,700 doctoral students, and 3,252 staff members - professors, professor-researchers, researchers and administrative and technical staff.

## Introduction to the host laboratory

**Location :** **3901 - DIR. DE L'OBSERVATOIRE OCEANOLOGIQUE DE VILLEFRANCHE / UMS 829**
*Sorbonne Université - Port de la Darse - 06230 Villefranche-sur-Mer, France*

The *Institut de la Mer de Villefranche* (IMEV - ex-*Observatoire Océanologique de Villefranche-sur-Mer*) belongs to Sorbonne University. Its missions include research, dissemination of knowledge, academic training and ocean observation. The research themes carried out cover biological, chemical and physical oceanography, as well as cell and developmental biology.

The selected applicant will be part of the marine optics group of LOV (http://omtab.obs-vlfr.fr)

## Role and primary tasks

The scientific computational engineer is responsible for implementing mathematical methods, models and data processing techniques to process and quality control data collected as part of the BOUSSOLE observation program (http://www.obs-vlfr.fr/Boussole/). His/her tasks also include logistical support to field operations in the framework of the same program.

**Primary tasks:**
- Process, qualify and make the data collected by the BOUSSOLE program accessible.
- Implement mathematical analysis and calculation methods to exploit data from on-site observations of bio-optical and oceanographic variables.
- Develop and optimize codes to address specific problems in marine optics and oceanography.
- Manage the life cycle of data input and output of calculations.
- Ensure the documentation, maintenance and publication of the methods and tools developed in English
- Install scientific calculation tools and software on the computers.

- Provide support to users of computing resources together with the IT department in charge.
- Contribute to the administration of the IT system.
- Organize presentations and training to ensure the transfer of knowledge and skills
- Provide technical support to users of this data.
- Provide logistical and experimental help to support the observation program.

**Project management:** NO

**Supervision:** NO

*The agent may be required to share his knowledge, conduct internal training and participate in contests as jury member.*

## Knowledge and skills*

**Required skills:**
- Mathematics.
- Algorithmic.
- Scientific calculation tools (*e.g.* R, Matlab, Fortran).
- General knowledge of marine optics and oceanography.
- Written and oral presentation techniques.
- Proficiency in spoken and written English level B2.
- Proficiency in spoken and written French appreciated.

**Know-how:**
- Programming capability for data processing (e.g. R, Matlab, Fortran).
- Use of operating systems (Linux, Windows).
- Use of oceanographic data acquisition software.
- Use of office software (Office type).
- Knowledge transfer.

**Soft-skills:**
- Accuracy and analytical skills.
- Organization and social skills.
- Ability to work independently and as part of a team.

** In accordance with the appendix to the decree of 18 March 2013 (NOR : MENH1305559A)*