

**FICHE DE POSTE**

<b>Libellé de Fonctions :</b>	<b>Research engineer in scientific computing</b>
<b>Catégorie :</b>	<b>A+</b>
<b>Corps :</b>	<b>Research engineer</b>
<b>BAP :</b>	<b>E</b>
<b>About us</b>	
<p>Sorbonne University is a multidisciplinary research university created on January 1, 2018 by grouping the universities Paris-Sorbonne and UPMC.</p> <p>Offering training to 54,000 students, including 4,700 doctoral students and 10,200 international students, it employs 6,300 teachers, associate professors and researchers and 4,900 library, administrative, technical, social and health staff. Its budget is € 670 million.</p> <p>Sorbonne University has a leading potential, mainly located in the heart of Paris, and extends its presence in more than twenty sites in Île-de-France and regions.</p> <p>Sorbonne University is a research-intensive, multidisciplinary, global university composed of three faculties: Arts and Humanities, Science and Engineering, and Medicine.</p> <p>This new world-class institution of knowledge will have the task of meeting the intellectual and scientific challenges of the 21st century. Sorbonne University's three faculties each enjoy significant decision-making autonomy so that those closest to the ground can use their expertise to help the university bring its strategic vision to fruition.</p>	
<b>About the laboratory and context</b>	
<p>The international Argo programme (for more details, see <a href="http://www.argo.ucsd.edu/">http://www.argo.ucsd.edu/</a>) was initiated in 1999 as a pilot project endorsed by the Climate Research Program of the World Meteorological Organization, GOOS, and the Intergovernmental Oceanographic Commission. The Argo network is a global array of more than 3500 autonomous instruments, deployed over the world ocean, reporting subsurface ocean properties to a wide range of users via satellite transmission links to data centres.</p> <p>Sorbonne University (Laboratoire d'Océanographie de Villefranche sur mer, OSU Ecce Terra) in partnership with the operational oceanography center Coriolis actively participates at the international level in the implementation of the quality control of biogeochemical variables acquired by the floats BGC-Argo. This quality control is divided into two phases: a first series of automatic tests (carried out within 24 hours after data collection, a so-called "real-time" mode) and a second, which involves scientific expertise (carried out in a wider interval, so-called "Delayed" mode).</p> <p>One of the tasks of the European EARISE project (<a href="https://www.euro-argo.eu/EU-Projects/Euro-Argo-RISE-2019-2022">https://www.euro-argo.eu/EU-Projects/Euro-Argo-RISE-2019-2022</a>) is dedicated to the definition, the organization and the initial implementation of all the data management (ie quality control in real time and delayed mode, data flow, setting up reference database, verification and evolution of the algorithms, coordination and interfacing with national data centers and BGC-Argo program at European level.</p> <p>Work will be done in close collaboration with laboratories and institutes responsible for defining quality control procedures of the 6 core BGC-Argo variables (Plymouth Marine Laboratory, UK ; GEOMAR, DE ; LOV, FR) as well as with the European operational centers of the Argo program (BODC, UK ; Coriolis, FR ; BSH, DE).</p>	

## Mission and main activities

### Mission

Organize the quality controls of the biogeochemical parameters of the BGC-Argo program at the european scale.

### Main Activities

- Set up and optimize quality control procedures for biogeochemical data
- Perform the data processing
- Maintain the databases created
- Write the documentation
- Adapt IT applications to project needs
- Coordinate the European implementation of data quality control of the BGC-Argo program

## Skills

### Main skills :

- Mathematics, statistics
- Programming language (R, Matlab, Shell, Python)
- Data Format (NetCDF)
- Collection, analysis and data processing
- Linux, Unix
- English : B2 (Common European Framework of Reference for Languages)

### Operationnal skills:

- Heterogeneous data processing
- Define and calculate indicators to measure performance and improve quality control
- Guarantee the quality and relevance of analysis tools and results

### Transversal skills :

- Interact with scientists (biogeochemists, chemists, physicists) and computer scientists
- Write synthetic reports
- Biogeochemistry skills are welcome

### Human skills :

- Teamwork
- Autonomy and adaptability

### Required Degree

- PhD, engineering degree
- Training area : mathematics, scientific computing

### Contract

- Employer : Sorbonne Université
- Type of contract : Full Time fixed term contract (23 months)
- Remuneration : according to the salary scale of the contractual agents
- BIATSS (according to experience monthly gross salary from 2500€/mois)
- Workplace : Campus Jussieu Paris (with frequent travel to Villefranche s/mer)

\*Conformément à l'annexe de l'arrêté du 18 mars 2013 (NOR : MENH1305559A)