

Engineer/Post-doctoral position – 12 months

## EOSC-Life academia-industry collaboration - **QSM4SENIOR** project

**European Open Science Cloud in life sciences** (EOSC-Life<sup>1</sup>) brings together the 13 Life Science ‘ESFRI’ research infrastructures to create an open, digital and collaborative space for biological and medical research. The **BAOBAB laboratory** (Neurospin<sup>2</sup>, affiliated to the French National Center for Scientific Research – CNRS, to the Alternative and Atomic Energies Agency– CEA, and to Paris-Saclay University) and the company **VENTIO**<sup>3</sup> are looking for a motivated engineer / post-doctoral researcher in the QSM4SENIOR project.

The **QSM4SENIOR** project is funded by the EOSC-Life academia-industry collaboration for sharing data, tools and workflows in the European Open Science Cloud. The main objective is to **process and qualify the ultra-high field brain MRI data of the SENIOR cohort<sup>4</sup> with a new imaging biomarker of iron** (Quantitative Susceptibility Mapping<sup>5</sup>) in the context of aging, in order to render processing **interoperable** with EOSC-Life infrastructures and **open the database** for future research.

We are looking for a curious, motivated, team-oriented candidate with interest in signal processing, physics, computer science, applied mathematics, biomedical engineering or related topics. Prior knowledge in biomedical image processing and/or Magnetic Resonance Imaging data processing is a plus. The successful candidate will work in the BAOBAB lab (Neurospin, Saclay, Paris Area, France) composed of physicists, neuroscientists, clinicians in collaboration with EOSC-Life experts and the company VENTIO (Marseille, France). The industrial partner is developing cloud-based interoperable and secure biomedical image processing tools, in particular for QSM processing. The project involves travels between Paris and Marseille, and interactions with EOSC-Life for project reports. **The candidate can either be based in Paris or Marseille**, and remote work will be possible given the current sanitary conditions.

### **ADDITIONAL SKILLS/ABILITIES/COMPETENCIES**

Candidates should be enthusiastic about working in an interdisciplinary environment. The successful candidate will be able to work collaboratively in an academic-industrial partnership environment, with the objective to join the company at the end of the project taking part of in research and development of its goods and services.

Written and oral English communication skills are expected. Candidates would be familiar with programming languages such as Python and bash, linux-based operating systems and biomedical image format (DICOM, BIDS) as well as biomedical image processing. Some experience with brain imaging or cloud computing are welcome, although the candidate shall develop corresponding skills during the project.

### **APPLICATION**

Interested candidates should send a cover letter describing previous experience, interest and future career goals, as well as an up-to date curriculum vitae to Dr. Alexandre Vignaud ([Alexandre.VIGNAUD@cea.fr](mailto:Alexandre.VIGNAUD@cea.fr)) and/or Dr. Ludovic de Rochefort ([ludovic.de-rochefort@ventio.net](mailto:ludovic.de-rochefort@ventio.net)).

This position is full-time with benefits and is available immediately contingent to work authorization for aliens to the European Union. Incentive salary based on experience.

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<sup>1</sup> <https://www.eosc-life.eu/>

<sup>2</sup> [https://joliot.cea.fr/drf/joliot/Pages/Entites\\_de\\_recherche/NeuroSpin.aspx](https://joliot.cea.fr/drf/joliot/Pages/Entites_de_recherche/NeuroSpin.aspx)

<sup>3</sup> [www.ventio.net](http://www.ventio.net)

<sup>4</sup> <https://doi.org/10.1186/s13195-020-00642-1>

<sup>5</sup> [https://en.wikipedia.org/wiki/Quantitative\\_susceptibility\\_mapping](https://en.wikipedia.org/wiki/Quantitative_susceptibility_mapping)