

Titre de l'annonce	<h1 style="text-align: center; color: purple;">Post-doc position - OPM MEG - Lyon - France</h1>
3 mots clé -	MEG OPM
Ville	Lyon
Pays	France
Texte de l'offre	<p>Postdoctoral / Research Engineer Position</p> <p>Labex CORTEX - Lyon University (https://labex-cortex.universite-lyon.fr)</p> <p>Applications are invited for a full-time post-doctoral / research engineer position in the Lyon CERMEP MEG lab.</p> <p>The position is for a methodologically-oriented person to test different MEG sensors based on Optically Pumped Magnetometers (OPMs), to develop and to evaluate new multimodal OPM data analysis approaches to correct artefacts and to perform source localisation. Our ultimate goal is to build a fully featured OPM MEG Lab in Lyon by the end of 2024.</p> <p>This position will allow the postdoctoral fellow to gain expertise early in a new technology which promises to be very relevant for human neuroscience and clinical research for some time to come: OPMs are wearable MEG sensors which can be placed near the scalp allowing a 3-8 fold increase in SNR of neuromagnetic activity recording. Thus they open a vast new field of applications: these systems with a light, conformable array of sensors will be of great interest for exemple for paediatric patients and to record the foetal brain activity.</p> <p>More specifically, the postdoctoral fellow will work with a promising and very original alternative to classical OPMs: Our partner, Mag4Health is developing beyond the state-of-the-art OPM using Helium gas . This OPMs have unique advantages as compared to classical OPMs: i) they operate at room temperature without</p>

heating, ii) they have a large dynamic range allowing for lightweight shielding and subject's movement and a large frequency bandwidth adapted to the brain electrical activity (0-2kHz), iii) They output a 3D vectorial measure of the magnetic field giving access to previously non-recorded brain activities.

The selected postdoctoral fellow will be supervised by Denis Schwartz (<https://www.cermep.fr>) and will be located at the CERMEP MEG Lab. They will work collaboratively with our growing OPM work group (James Bonaiuto, Suliann Ben Hammed, Jean-Claude Dreher from (ISCMJ - <http://www.isc.cnrs.fr>), Olivier Bertrand, Jérémie Mattout, Romain Quentin, Mathilde Bonnefond from (CRNL - <https://www.crnl.fr>) and Nils Kolling, Jérôme Sallet, Emmanuel Procyk from (SBRI - <https://www.sbri.fr>).

Requirements for the candidates:

- Hold a biomedical / electrical engineering degree or a PhD in a related field;
- Strong signal processing skills
- Prior experiences in artefact correction, especially movement-related artefact correction
- Programming skills (matlab; python)

- Be an overall good lab citizen
- Good mastery of both oral and written English

The following experiences will be a big plus:

- Prior experiences in computer vision techniques for movement capture and analysis
- Prior experience with electrophysiological MEG (classical or OPM) / EEG signals
- Past experience in building an electrophysiology lab

French is not a requirement.

Expected Starting date: January 2022

	<p>Salary: commensurate with experience (from 1 289 € to 2 354 € per month after taxes) ; the position will be funded for up to 3 years.</p> <p>Application package :</p> <ul style="list-style-type: none"> ■ CV (incl. a list of publications) ■ A letter of motivation ■ Two letters of recommendation (or contacts from which those could be obtained) <p>Send your application package to denis.schwartz@inserm.fr</p>
Date de fin de publication :	14/10/2021
Type d'emploi	Post-Doctorat - Post-Doctoral position
Type de contrat	CDD
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