**Posdoc position in Marseille, France.**

**Where:** Institut de Neurosciences des Systèmes (INS) within the dynamap team (ins-amu.fr/dynamap). Aix Marseille University. Marseille France.

**INS** is comprised of various research groups that collectively make up the multidisciplinary team of researchers whom share a common approach to studying the brain as a dynamic system.

The general objective of the **Dynamap team** is to develop signal processing strategies for characterizing the spatio-temporal dynamics of brain networks, for both physiological and pathological activity. With this in view, the first strategy of the team is to combine the strength of different modalities such as EEG, MEG, fMRI, with particular emphasis on simultaneous recordings (EEG-MEG, EEG-fMRI) that allow recording the exact same activity under different points of view. The second strategy is to take the opportunity of intracerebral recordings (SEEG) performed in patients with epilepsy for providing a ‘ground truth’ to which non-invasive methods can be confronted. The team is housed in the epileptology department (Pr F Bartolemei, renowned for its treatment of epilepsy and its inherited mastery of SEEG.

**For what:** The main objective is to demonstrate that the whole head 4He-OPM magnetoencephalography system can be used for monitoring epileptic patients in a clinical environment. To this end, the successful candidate will be in charge of recording and analyzing simultaneous recordings, Squid MEG versus SEEG and 4He-OPM versus SEEG. Secondly, the 4He-OPM MEG system’s ability to achieve long-duration recordings, which is virtually impossible with conventional Squid technology, will be developed.

**Who:** PhD with methodological background in biomedical engineering and neurosciences will be preferred but not mandatory. Preference for candidate with experience in data acquisition and signal processing. Appreciated experience of working in a team and good people skills to facilitate interactions with patients.

**When:** starting January 2024.

**Salary:** depending of the experience and applicant profile

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