



PhD/MSc positions available in the MultiFunkIm Lab - Montreal Canada

We are happy to announce that there are **few opportunities for graduate student positions (MSc or PhD)** available in our laboratory at Concordia University, Montreal Canada. The candidate will join a multidisciplinary and diverse team and will have the opportunity to get involved in projects dealing with multimodal data acquisitions and analysis (EEG/MEG, high density EEG/fMRI, prolonged EEG/fNIRS recordings) for applications in epilepsy presurgical mapping and sleep studies, including advanced methodological, machine learning and statistical analysis developments and contributions to neuroimaging software implementations. The candidate will be involved in multimodal data acquisition campaigns, method developments and advanced data analysis on large databases. Data acquisitions will take place either at Concordia School of Health (<https://www.concordia.ca/schoolofhealth.html>) or at the McConnell Brain Imaging Centre of the Montreal Neurological Institute at McGill University (<https://www.mcgill.ca/bic/>).

Typical research projects include multimodal analysis of **functional connector hubs** in sleep and epilepsy (resting state, fMRI, PET and MEG source imaging), contributing to **EEG/MEG source imaging** development and validation through simultaneous MEG and intracranial EEG recordings, as well as contribution to the development of our first **EEG/fNIRS atlas of healthy sleep physiology**.

Applicants should have a strong background in biomedical engineering, biomedical physics, and/or image and signal processing. Advanced experience with Matlab and/or Python programming, excellent organizational skills, an aptitude for teamwork, and good writing skills are also expected. Experience in one or more aspects of the research themes, including experience in data acquisitions or in specific neuroimaging software packages will constitute an asset.

Software packages developed in the lab:

- Source imaging using Maximum Entropy on the Mean:
<https://neuroimage.usc.edu/brainstorm/Tutorials/TutBEst>
- Advanced analysis for fNIRS data within NIRSTORM software :
<https://github.com/Nirstorm/nirstorm> , <https://neuroimage.usc.edu/brainstorm/Tutorials/NIRSTORM>

The Multifunkim lab is committed to promote equity, diversity and inclusion, so we are encouraging recruitments from diverse populations.

For more general information about the lab please check our website: <https://www.multifunkim.com/>

Review of applications will begin as they are received and will continue until the positions have been filled. If interested please send your CV, a brief statement and two references letters to: christophe.grova@concordia.ca

Cordially

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