

Postdoctoral Fellowship in Multimodal Neuroimaging of Sleep and Cognition

We are presently recruiting a **Postdoctoral fellow in Multimodal Neuroimaging of Sleep and Cognition**.

The fellow will have the opportunity to setup and conduct empirical (f)MRI, simultaneous EEG/fMRI and/or PET research in clinical and in healthy samples, as well as to analyze and write up findings of previously collected human neuroimaging data. He/she will also have the opportunity to develop and evaluate new multimodal data analysis approaches (for instance, EEG source localization, PET-fMRI fusion, resting state fMRI hub analysis). He/she will be based at Concordia University (Montreal, Quebec), jointly supervised by Drs. Thanh Dang-Vu and Christophe Grova, and will work in a highly multidisciplinary environment (neurosciences, exercise science, physics, engineering, psychology) and in collaboration with multiple academic and hospital institutions in Montreal (PERFORM Center, Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal [CRIUGM], Montreal Neurological Institute [MNI]).

The research themes that will be addressed by the Fellow will include:

- The neural mechanisms of sleep, sleep deprivation and sleep disorders (chronic insomnia, central disorders of hypersomnolence), and their relationship with cognition.
- Developing and evaluating methods dedicated to the analysis of multimodal neuroimaging data for sleep studies, including EEG-fMRI fusion, fMRI functional connectivity and brain network analysis (reorganization of functional connector hubs during sleep and sleep disorders).

The PERFORM Centre is a 8,000 m² research facility including eight inter-related research platforms, such as a state of the art sleep laboratory (3 bedrooms with polysomnography and high-density EEG) and a fully equipped imaging suite (3T MRI, SPECT-CT, PET-CT, Ultrasound, Dexa, high-density EEG, and TMS) entirely dedicated to research (<http://www.concordia.ca/research/perform.html>). The CRIUGM is a leading research center on aging, and also includes multiple research platforms, such as a sleep laboratory, a functional neuroimaging unit (3T MRI) and a clinical research unit (<http://www.criugm.qc.ca/en.html>).

Applicants must have a PhD (or close to completion) in a related field (e.g., neurosciences, computer science, (bio)medical engineering, psychology). Applicants should have strong knowledge of Matlab and/or experience in analysis of neuroimaging, excellent organizational skills, an aptitude for teamwork, good writing skills and a productive publication record. Experience in one or more aspects of the research themes will constitute an asset. Salary will be determined according to education and experience. This appointment will be renewable on a yearly basis, contingent on satisfactory performance and funding. The position has a flexible start date.

Applicants should send their curriculum vitae and a letter of motivation to the principal investigators listed below. Review of applications will begin as they are received and will continue until the position has been filled. All requests for additional information should also be directed to them. Only those candidates selected to interview will be contacted.

Dr. Thanh Dang-Vu, M.D., Ph.D.
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For more information about our current research programs, please visit the lab websites:

<https://scnlab.com>

<https://www.concordia.ca/artsci/physics/research/grova-research-group.html>