Postdoc on multimodal imaging (EEG-MRI-PET) and temporal cognition with aging

Review of applications will continue until the position is filled

- INSERM U1077 – Cyceron Brain imaging center, Caen 14000, France
- Two-year full-time position (renewable)

The INSERM-UNICAEN-EPHE U1077 research unit based in Caen (Normandy, France, https://nimh.unicaen.fr/fr/accueil/) invites applications for a position as a Postdoc in the field of brain aging and time processing.

The recruited research will join the TIMES research program "Time processing changes with aging", led by Dr. Thomas Hinault (Ph.D). TIMES aims to understand the cognitive and neural mechanisms of temporal cognition and their evolution with aging.

We are ideally looking for a postdoc with a strong expertise in multiscale modelling, excellent programming skills, and a solid background in biophysics or mathematics.

Research Environment at Cyceron

The Caen Inserm Unit 1077 and Cyceron Neuroimaging Platform (France) offer an exciting and friendly multi-disciplinary research environment, with ample opportunities for training and collaboration, and excellent technical facilities. Cyceron is a structure devoted to multimodal imaging (pre-clinical and clinical) and provides a stimulating work environment as it groups several research units and several research instruments, such as a cyclotron for molecular marking, 2PET-CT, 2 MRI (including a brand-new GE 3T), and a molecular and cellular imaging department.

Caen is a friendly environment with an excellent work-life balance. We are located 12 km away from the Normandy coast and beaches. Caen is a young and vibrant city with many venues for music and culture.

The project

TIMES will involve the recruitment of healthy young and older participants for a neuroimaging and cognitive assessment of time processing. Participants will first undergo a PET dopaminergic imaging and a simultaneous EEG-fMRI recording while participants perform temporal cognition tasks. An EEG and behavioral follow-up session will then be performed each year for three years.

The current job offer will be centered around modelling the interactions across brain imaging modalities, and the association of the identified neural markers with aging effects on temporal cognition.

What we expect from you

Your task will be to contribute to the multiscale and multimodal modelling of EEG/PET/MRI data (at least two of these techniques), including modelling of large-scale neural dynamics (knowledge about *The Virtual Brain* is recommended).

Importantly, you will also be asked to standardize the modelling pipeline, optimize the quality control, and contribute to the training and supervision of younger PhD student in the lab.

Competences requested

- You have academic qualifications at PhD level, preferably within one or more of the following areas: neuroscience, biophysics, neurobiology.
- Demonstrating skills in analysis of brain imaging data and programming is important.
- Proficiency with Matlab and Python is essential as well as experience with fMRI, EEG orPET analyses.
- A high level of written and spoken English is important.
- Knowledge of French language is beneficial but is not required.

Your application

Please include the following documents in your application: motivation letter including academic goals and research interests, curriculum vitae, and at least one recommendation letter. A maximum of five publications that you believe of greatest relevance to the job may also be submitted. Applications, questions or informal enquiries about the position, should be sent to Dr. Thomas Hinault (thomas.hinault@inserm.fr).

Terms of employment

- Gross salary starts at 2900 Euros for a fulltime postdoc position with less than 3 years of working experience after PhD graduation, and increases with years of experience.