PhD Student Position at the GIGA - Cyclotron Research Centre / In Vivo Imaging
University of Liège, Belgium

Circadian rhythms - one of the most fundamental processes of living organisms - are present throughout the nervous system and act on cognitive brain function. Circadian rhythms shape the temporal organisation of sleep and wakefulness. Importantly, this temporal organization evolves throughout the adult lifespan, leading to higher sleep-wake fragmentation with ageing. In this research project, we aim at characterizing the link between cognitive ageing and the temporal distribution of sleep and wakefulness. The project entails human constant routine protocols, monitored by EEG, fine-grained assessments of cognitive abilities as well as structural and functional MRI assessments. A 1-year interventional arm, acting on sleep-wake habits, as well as a longitudinal follow-up are also planned.

The candidate will participate to acquisitions and analyses of data obtained at home, as well as under strictly controlled chronobiology protocols. He/she will use a variety of approaches including neuropsychological testing, actigraphy, EEG and MRI.

Qualifications and requirements. Candidates with a MSc in any disciplines related to the topics of the call can apply (neurosciences, neuropsychology, biology, biomedical sciences, biomedical engineering, biostatistics etc.). Skills and experience in one or more of the following topics are considered as strength: acquisition/analysis of MRI, EEG data, neuropsychological assessments, running constant routine protocols. Candidates should be interested in the brain mechanisms of cognition and sleep-wake regulation in aging. Speaking French is considered beneficial (for interactions with study participants) but candidates willing to learn French during the PhD training are also strongly encouraged to apply.

Supervisors. The PhD bursary will be mainly supervised by Dr. Christina Schmidt and Dr. Vincenzo Muto at the GIGA - Cyclotron Research Centre / In Vivo Imaging.

Work environment. Our team has direct access to research-dedicated neuroimaging and electrophysiology equipment including a 3T MRI scanner, five bedrooms for full polysomnography recordings and neuropsychological testing, and a growing database of participants included in chronobiology protocols. Within the GIGA Graduate School, PhD bursaries will have the opportunity to follow specific training and improve their skills in relation to the project topics.

Contract duration. The PhD bursaries are advertised for 2 years, extendable to 2 more years, and start on January 2018. Monthly salary of bursary will be provided upon request and follows Belgian regulations.

Applications. Applicants are invited to respond as soon as possible and no later than November 19th 2017, by submitting a curriculum vitae (including publication list if applicable), a one-page summary of research interests and expertise, and names and contact details of two referees to christina.schmidt@ulg.ac.be