1 Postdoc Positions
Cognitive Neuroscience & Neuroimaging

GIGA - Cyclotron Research Centre / In Vivo Imaging
Université of Liège - Belgium

When: Contract start between April 1st and October 1st
Where: ULiège
Duration: 1.5 year (may be extended)

Besides its visual role, light is essential to the regulation of many non-visual or non-image-forming (NIF) functions. Our lab has conducted a series of fMRI studies elucidating part of the brain mechanisms underlying the stimulating impact of light on cognition. Yet, we do not know what an efficient dose of light is. This project wants therefore to determine light level that is physiologically effective. To measures effectiveness the project will focus on activity with the brainstem and diencephalon as many of their nuclei may be the first to receive light signal.

Experiments will be conducted in healthy young adults of both sexes using Ultra-high-field high-resolution 7 Tesla MRI geared towards subcortical areas. Results could have implications for the design of Human Centric Lighting devices.

Research will be conducted under the supervision of Dr. Gilles Vandewalle and in collaboration with Dr. Balteau, MR physicist, and Dr. Phillips, MR method developer, at GIGA-Cyclotron Research Centre-In Vivo Imaging @ ULiège.

Qualifications and requirements
- Candidate should be skilled, highly motivated, have excellent communication and organizational skills, able to work independently and as part of a team.
- Candidates must have a PhD in any disciplines related to the topics of the call (engineering, computer sciences, biomedical sciences, neuropsychology, cognitive neuroscience, biology, etc.).
- Good statistical skills and pre-exposure to Matlab, R and/or Python are requested.
- Previous experience in EEG, TMS or MRI imaging is also requested.
- Experience in chronobiology, sleep or cognitive neuroscience is appreciated.
- Mastery of English is a requirement; mastery of French is a bonus. Learning French will be requested from those not mastering the language.
Work environment
GIGA-CRC IVI is a research team including psychologists, neurologists, chemists, physicists and engineers, gathering complementary skills in developing novel technical and methodological tools to better characterise the structure and function of the human brain. Applications and fields of research include sleep and chronobiology, healthy ageing and neurodegenerative diseases, multiple sclerosis, glioblastomas, and many fields of cognitive neuroscience.

The team has direct access to research-dedicated equipment, including a PET scanner (ECAT+, Siemens), a 3T whole-body MRI scanner (Magnetom Prisma, Siemens), neuro-navigated TMS-EEG, high-density EEG system and a sleep and chronobiology unit with five temperature-controlled, light-calibrated, soundproof bedrooms equipped for EEG recordings. A 7T Magnetom Terra MRI scanner was just installed.

Application
Applicants are invited to respond as soon as possible no later than May 8th 2020. Please include all the following documents in PDF format: CV (including list of publications), contact information for two referees, a brief letter (maximum 2 pages) describing your personal qualifications, research interests and motivation for applying.

Applications or informal enquiries should be sent via email to gilles.vandewalle@uliege.be. Candidates shortlisted for interview may be required to give a short research presentation. Interviews of shortlisted candidates are planned between March 16th and May 15th 2020.