Brain imaging PhD trainee project available

Keywords: sleep, emotion, arousal, high-density EEG, fMRI, insomnia, internet assessment

The Sleep & Cognition group at the Netherlands Institute for Neuroscience in Amsterdam, the Netherlands, applies MRI, 256-channel EEG, TMS and internet assessment for top-notch neuroscience research on causes and consequences of disturbed sleep. A group profile can be found on:
http://www.nin.knaw.nl/research_groups/van_someren_group/

The group invites excellent candidates with a Masters degree and sufficient relevant background to apply for a 3-year PhD project that aims to elucidate brain mechanisms underlying the eleveated risk that people with insomnia have to develop depression. The project builds on two recent insights. The first is that unperturbed periods of REM sleep ameliorate emotional arousal indexed by the autonomic and central nervous system, including amygdala activation. The second is that perturbed REM sleep is a key signature of people suffering from insomnia. A possible consequence of these two findings is that the chronically perturbed REM sleep of insomniacs could interfere with emotion regulation and lead to their typical chronic hyperaroused state, which in turn makes them vulnerable to exhaustion and depression. To address this hypothesis, the project integrates 256-channel sleep EEG and fMRI experiments with web-based assessment tools implemented on the Netherlands Sleep Registry platform (www.sleepregistry.org).

The candidate has experience with fMRI and/or high-density EEG. Good English writing skills as well as experience with javascript and software like Matlab, R and E-prime are appreciated. Mastery of the Dutch language will be necessary to conduct the experiments with people suffering from insomnia. The project results in a PhD degree.

Applications including a letter stating motivation and relevant background, a CV and letters of recommendation of two referees can be emailed until Januari 31, 2013, to Prof. dr. E.J.W. Van Someren, e.van.someren@nin.knaw.nl.

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