

PhD Student / PostDoc Position

Scientific Project Description:

We are searching for a PhD student/PostDoc to work on a project entitled "Neural Mechanisms of Processing and Recognizing Complex, Statistical Sounds". This project is funded by the NWO and will be conducted at the Radboud University.

The main research question is how the brain represents and processes acoustic stimuli which are only defined on a statistical level. These stimuli have a high behavioural relevance, since many natural stimuli have this character. The project will involve a combination of neural population recordings from multiple areas of the auditory and parietal cortex of behaving mice, and their subsequent data analysis, requiring advanced mathematical decoding skills. Individual cells will be identified using specific genetically modified mouse lines and matched optogenetic tools. The main outcome of the research is an extension of our knowledge of auditory processing, which may have far-reaching applications for the processing of sounds in hearing aids and smartphones.

Requirements:

- MSc degree in (computational) neuroscience, engineering or biology.
- Experience with animal physiology, programming and data analysis.
- The applicant should have a pro-active attitude, good communication skills, and be able to effectively work in a multi-disciplinary team.

Work Environment:

The Donders Institute for Brain, Cognition and Behaviour consists of three research centres, the Centre for Cognition, the Centre for Cognitive Neuroimaging and the Centre for Neuroscience. The Donders Institute focuses on state-of-the-art cognitive neuroscience, in a multidisciplinary approach, and offers excellent lab and neuroimaging facilities.

The position will be hosted at the Neurophysiology department, which provides a high quality neuroscience environment with facilities for chronic and non-chronic many-channel recordings, imaging and computational modeling. The research questions of the department range from fundamental to applied, and enable the interaction of theory and experimental work in a single location.

The Donders Institute is an equal opportunity employer, committed to building a culturally diverse intellectual community, and as such encourages applications from women and minorities. Radboud University offers a parental leave scheme and day care on campus.

For more information:

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