Doctoral Research Fellowship in Cognitive Neuroscience

Job description

A Doctoral Research Fellowship (SKO 1017) in cognitive neuroscience is available as a part of the research project Neurophysiological Mechanisms of Human Auditory Predictions: From population- to single neuron recordings. The project is affiliated with RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion at the University of Oslo**.**

RITMO is a Centre of Excellence funded by the Research Council of Norway. This interdisciplinary centre focuses on rhythm as a structuring mechanism for the temporal dimensions of human life. Methods from musicology, psychology, neuroscience, and informatics are combined to study rhythm as a fundamental property that shapes and underpins human cognition, behavior, and cultural expressions.

All RITMO researchers are co-located and work in a unique interdisciplinary constellation, with world-leading competence in musicology, psychology, and informatics. It is expected that all members of the centre contribute to the general activities and collaborations within RITMO. The researchers have access to state-of-the-art facilities in sound/video recording, motion capture, eye tracking, physiological measurements, various types of brain imaging (EEG, fMRI), and rapid prototyping and robotics laboratories.

More about the position

The doctoral fellow will work on the project "Neurophysiological Mechanisms of Human Auditory Predictions: From population- to single neuron recordings", and will have a primary affiliation with the Structure and cognition cluster at RITMO. The overarching aim of the project is to identify the neurophysiological basis of auditory predictions beyond "classical" auditory areas. We will record electrical signals directly from the brains of patients with epilepsy (implanted with electrodes for clinical reasons) while they listen to streams of regular sounds that are occasionally replaced by unexpected events. We aim to delineate how distinct brain areas play different roles and interact in encoding auditory regularities, predicting upcoming sounds, and detecting unexpected sounds or silences.

The work of the doctoral fellow will have a particular focus on the roles of hierarchically organized brain areas and the different frequencies of oscillations supporting their communication during the prediction of regularities of auditory stimuli. The interaction between attention and predictions will also be addressed.

In collaboration with interdisciplinary research staff, the doctoral fellow will develop a subproject that addresses core research questions of the overarching project. She/he is expected to be involved in all aspects of the research, including experimental design, data collection, signal analysis, and publishing results related to the project aims. All applications must include a research outline.

The project will be conducted in collaboration with the Department of Neurosurgery at Oslo University Hospital, Norway, the Department of Psychology/Helen Wills Neuroscience Institute at UC Berkeley, USA, and the Neurosciences and Complex Systems Unit at El Cruce Hospital - CONICET, Argentina.

The research fellow must take part in the Faculty of Social Sciences approved Ph.D. program and is expected to complete the project within the set fellowship period.

The appointment is for a duration of three years, starting February 1st, 2022. There might be a possibility to extend the appointment to 4 years depending on the qualifications of the recruited candidate, the Department of Psychology's need for teaching, or the centre's need for assistance.

Qualifications/requirements

- A Master's degree or equivalent degree with a background in cognitive neuroscience, computational neuroscience, biomedical engineering, biomedical sciences, or related fields qualifying for admission to the Ph.D. program at the Department of Psychology, Faculty of Social Sciences, University of Oslo. The applicant is required to document that the degree corresponds to the profile for the post. The degree must have been obtained by the time of application.
- Experience and knowledge in two or more of the following: a) Cognitive models and brain structure/function, b) Cognitive experimental designs, c) Programming skills, d) Processing of electrophysiological data (event-related potentials and oscillatory activity), and e) Statistics
- Personal suitability and motivation for the position
- Excellent skills in written and oral English. Speaking a Scandinavian language is an advantage due to interaction with patients, but not a prerequisite
- The candidate's proposed research project must be closely connected to RITMO's research profile
- Experience with working across disciplines is an advantage

In assessing the applications, special emphasis will be placed on:

- The applicant's scientific merit, as well as the quality of the research outline and its relevance to the research objectives of RITMO and the project
- The applicant's estimated academic and personal ability to carry out his/her research within an allotted time frame
- The applicant's ability to work independently, collaboration skills, and ability to join interdisciplinary communities
- The applicant's flexibility to deal with unexpected events

We offer

- Salary level 482 200-526 000 NOK, depending on qualifications
- A professionally stimulating working environment
- Attractive welfare benefits
- Membership in the Norwegian Public Service Pension Fund

How to apply

Applications must include:

- Application letter describing the applicant's qualifications, motivation for the position, and career goals
- Curriculum Vitae (complete list of education, positions, teaching experience, administrative experience and other qualifying activities, including a complete list of publications with links to full version of published papers)
- Research outline, including relevant research questions and theoretical and methodological approaches (approximately 2-3 pages, see the template for research outline)
- Transcript of records of your Master's degree. Applicants with education from a foreign university must attach an explanation of their university's grading system
- Names and contact details of 2-3 references (name, relation to candidate, e-mail, and telephone number)

The application with attachments must be delivered in our electronic recruiting system, jobbnorge.no. Please note that all documents must be in English and preferably in pdf format.

Educational certificates, master theses, and the like are not to be submitted with the application, but applicants may be asked to submit such information or works later.

The short-listed candidates will be invited to an interview.

Formal regulations

Please see the guidelines and regulations for appointments to Research Fellowships at the University of Oslo.

No one can be appointed for more than one PhD Research Fellowship period at the University of Oslo.

Deadline: 1 September 2021

Contact information

Head of Administration Anne Cathrine Wesnes, e-mail: a.c.wesnes@imv.uio.no, phone number:

+47 22 85 44 89

HR Adviser Hilde Kristine Sletner, e-mail: h.k.sletner@hf.uio.no