



Postdoctoral Research Fellowship in Electrophysiological basis of rhythm perception and production

About the position

A Postdoctoral Research Fellowship (SKO 1352) in Electrophysiological basis of rhythm perception and production is available at [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.

Job description

The postdoctoral fellow will carry out research on the neural mechanisms and systems that support and enable rhythm perception and production in the human brain. Methodologically, the appointed candidate will be involved in subprojects using scalp electroencephalography (EEG) and/or invasive electrocorticography (ECoG) concurrent with cognitive experiments. High-density scalp EEG will be recorded from healthy adults and from neurological patients with focal brain damage, whereas ECoG will be recorded from patients with medically refractory epilepsy undergoing intracranial electrophysiological monitoring for seizure detection prior to surgery.

The ECoG studies are conducted in collaboration with the Department of Neurosurgery at Oslo University Hospital and the Department of Psychology/Helen Wills Neuroscience Institute at UC Berkeley (USA). The project is part of a larger study aimed at understanding the functional and neural basis of prediction and rhythm perception in the human brain.

The postdoctoral fellow will be involved in all aspects of the research, but will have a particular responsibility for advanced analysis and modelling of EEG and ECoG signals from humans. It is expected that the postdoctoral fellow will work independently, but also participate in several of the different sub-projects of RITMO.

The appointment is for a period of three years, starting 1 September 2019. There might be a possibility to extend to four years depending on the qualifications of the recruited candidate, the departments' needs for teaching, and the centre's need for assistance.

The successful candidate is expected to become part of the research environment/network of RITMO and contribute to its development. The main purpose of postdoctoral research fellowships is to qualify researchers for work in higher academic positions within their disciplines.

Qualification requirements

- A PhD degree or equivalent in computational or cognitive neuroscience, neuroimaging, biomedical engineering, or related fields. The applicant is required to document that the degree corresponds to the profile for the post.
- Demonstrated competencies using EEG analysis tools as well as Matlab, Python, or similar programming languages are prerequisites for the position.
- Experience with brain network connectivity analyses and machine learning techniques are particularly advantageous.
- Interest in music and knowledge of music theory is also considered an advantage.
- Excellent skills in written and oral English.
- The candidate's proposed research project must be closely connected to RITMO's research profile.
- Personal suitability and motivation for the position.

The doctoral dissertation must have been submitted for evaluation before the application deadline, and have been approved by the time of appointment. No one can be appointed for more than one postdoctoral period at the University of Oslo.

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

- the applicant's scientific merit, innovation, and research-related relevance to the objectives of RITMO
- the quality of the research outline
- the applicant's estimated academic and personal ability to carry out his/her research within an allotted time frame and contribute to the research objectives of RITMO
- excellent collaboration skills and the ability to successfully join in academic teamwork within and across disciplines.

We offer

- salary NOK 515 200 - 597 400, depending on qualifications
- a professionally stimulating working environment
- [attractive welfare benefits](#)
- membership in the Norwegian Public Service Pension Fund

How to apply

Applicants must submit the following attachments with the electronic application, preferably in pdf format:

- application letter describing the applicant's qualifications and motivation for the position
- 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 [template for research outline](#))
- names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

Diplomas, certificates, doctoral thesis and other academic works will be requested later.

Please note that all documents must be in English.

The short-listed candidates will be invited to an interview at the University of Oslo or we will arrange for a video-based interview.

Formal regulations

See also Regulations concerning [Post-Doctoral Research Fellowships](#).

Following the Freedom of Information Act (Offentleglova) § 25, Chapter 2, information about the applicant may be used in the public list of applicants even if the applicant opts out from the entry in the public application list.

The University of Oslo has an [Acquisition of Rights Agreement](#) for the purpose of securing rights to intellectual property created by its employees, including research results.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Contact information

Head of Administration Anne Cathrine Wesnes, a.c.wesnes@imv.uio.no, +47 22 85 44 89

HR Officer Karoline Farbrot, karoline.farbrot@hf.uio.no

About the University of Oslo

The University of Oslo is Norway's oldest and highest ranked educational and research institution, with 28 000 students and 7000 employees. With its broad range of academic disciplines and internationally recognised research communities, UiO is an important contributor to society.

RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion

is financed through the Research Council of Norway's Centre of Excellence Scheme. RITMO combines a broad spectrum of disciplines - from musicology, neuroscience and informatics - to study rhythm as a fundamental property of human cognition, behaviour and cultural expression. The Centre is organized under the Department of Musicology, in close collaboration with the Department of Psychology and the Department of Informatics.

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