An exciting opportunity has become available for

A Postdoctoral Researcher in Human Motor Neuroscience (for 4 years)

in the newly funded Freigeist research group "Motor Learning"
led by Dr Max-Philipp Stenner at the Department of Neurology and Leibniz Institute for Neurobiology in Magdeburg, funded by the Volkswagen Foundation (http://portal.volkswagenstiftung.de/search/projectDetails.do?ref=92977).

Our group

Through an innovative combination of **non-invasive and invasive human electrophysiology** in healthy individuals and neuropsychiatric patients, our group is studying **how the human brain predicts consequences of our own actions**, how these predictions influence our perception and our subjective experience of action, and how they guide motor learning. We are particularly interested in the role **local and interregional neural synchrony – neural oscillations** – play for the integration of sensory and motoric information underlying these processes. A long-term goal of the group is to set the grounds for brain stimulation techniques targeting neural synchrony for improved motor learning, and to understand pathophysiological implications of a deficient motor prediction system, e.g., in ataxia.

What we offer

The Leibniz Institute for Neurobiology (LIN) has a long tradition of **world-leading research on learning and memory**, both in animals and humans. The Motor Learning Group at the Leibniz Institute has first-rate access to Magdeburg's **excellent, state-of-the-art facilities for non-invasive human electrophysiology and neuroimaging**, including MEG, EEG, 7T & 3T MRI (all on the same campus). All facilities are supported by expert IT and physics staff. In addition, a very close collaboration exists with the Departments of Neurology and Stereotactic Neurosurgery (same campus) which allows for **systematic invasive electrophysiology in humans** and, more generally, **studies in clinical populations**. The Motor Learning Group is participating in Magdeburg's Collaborative Research Center 779 (www.sfb779.de). The Leibniz Institute and Department of Neurology, together with several other neuroscience institutes on the same campus, provide a **vibrant, international, highly inspiring, friendly and supportive research environment**. Magdeburg is a growing, intriguing city with lots of activities beyond work (second greenest city in Germany) and a familiar academic community.

Your tasks

The successful candidate will design, conduct, analyse and publish experimental studies into functions of neural oscillations for predictive motor control. This entails designing and conducting studies that combine elegant behavioural paradigms with EEG, MEG, and invasive (intracranial or spinal) recordings, and establishing, together with the other group members, a setup for motion tracking plus online movement feedback in MEG.

By working on and extending this programme, the successful candidate will be able to consolidate his scientific independence and qualification for a later group leadership of his own.

Qualities we are looking for

We are looking for a highly motivated, team-minded scientist with a strong interest in motor and/or perceptual neuroscience and a high degree of scientific creativity, passion, and rigor. Demonstrable experience with MEG or EEG is essential. Good programming skills (in particular Matlab) as well as

solid statistical skills and high proficiency in spoken and written English are mandatory. Suitable candidates should have a PhD in neuroscience, engineering (with a previous focus on neuroscience), psychology, or related.

Terms & conditions

The position is for four years. A preferable starting date is spring 2019, subject to negotiation. The position will remain open until filled. Salary is based on E 13 TV-L (i.e., basic salary (gross) between ~3700,- and ~4200,- Euros/month).

Selected Reading

Stenner et al., J Neurophysiol 2014

(http://jn.physiology.org/content/113/6/1752)

Shadmehr, Smith & Krakauer, Ann Rev Neurosci 2010

(http://annualreviews.org/doi/abs/10.1146/annurev-neuro-060909-153135)

Palmer et al., TICS 2016

(https://www.sciencedirect.com/science/article/pii/S136466131600070X)

How to apply

The application should include the following documents (in a single PDF-file): 1) Cover letter (max 2 pages) providing a brief description of current research work and achievements, research interests and motivation; 2) Curriculum vitae, including a list of publications; 3) contact details of two scientists who can provide references.

The application deadline is **January 31st 2019**. Please email this PDF file to

max-philipp.stenner@med.ovgu.de

by that deadline. Should you require any further information, please contact Dr Max-Philipp Stenner.