



**1 Postdoc Position (100%, TV-L 13)
on Microstructural Imaging of in vivo and ex vivo
Neuroimaging Data in Humans and Monkeys
Starting date as soon as possible**

One exciting Postdoc Position (100%, TV-L 13) for the duration of 3.5 years is offered by the Medical Faculty of the Otto von Guericke University Magdeburg, Germany. The position is funded by the newly approved Collaborative Research Center ([CRC-1436](#)) by the German Research Foundation, where more than 40 scientists from different research centers in Magdeburg, Berlin and beyond investigate the neuronal resources of human cognition.

The position will be based at the [Research Group Cortical Microstructure in Health and Disease](#) at the [Institute for Cognitive Neurology and Dementia Research \(IKND\)](#) and the [German Center for Neurodegenerative Diseases \(DZNE\)](#) in Magdeburg, Germany - unique research centers dedicated to understanding the microstructural basis of aging, neurodegeneration, and cognitive health. The centers are equipped with unique databases that include older people, superagers, and people with a variety of neurodegenerative diseases. The IKND and DZNE stand for excellence in research and science management, translation of scientific results into practice, interdisciplinarity, and internationalization. With over 1000 employees from 55 nations, spread over 10 sites in Germany, the DZNE is one of the leading research centers in the field of aging and neurodegeneration.

The post holder will have access to an MRI-PET scanner, three 3 Tesla MRI scanners, one research-only 7 Tesla MRI scanner, MEG and EEG systems, and, in the near future, the first 7 Tesla Connectome MRI scanner in the world that will be situated at the Magdeburg Medical Campus. As a unique opportunity, the post holder will have access to (and will have the possibility to acquire) both human and monkey in vivo and ex vivo 3T and 7T MRI data that will be used to develop improved computational models of brain microstructure. The positions will be situated at the IKND where multiple opportunities for collaboration exist in the areas of computational modelling,

multimodal data analyses, subcortical segmentation, and microstructural imaging. The position holder will be supervised by Dr. Esther Kühn in collaboration with Prof. Dr. Oliver Speck (head of [Institute of Biomedical Magnetic Resonance](#)) and Prof. Dr. Kristine Krug ([Professor for Sensory Physiology](#)).

We are looking for 1 Postdoctoral Researcher starting as soon as possible. Funding is available for funding period 1 of the CRC (until 12/2024); there are up to 3 funding periods possible in case of a successful evaluation of the CRC. The focus of the Postdoctoral position will be the development of computational models to analyze multi-modal structural ultra-high field neuroimaging data in humans while in vivo neuroimaging data, ex vivo neuroimaging data, and histology from non-human primates can be used for validation. The candidates are expected to work in an international and interdisciplinary team, with the central aim to drive forward the development of automated techniques for structural 7T data analyses and segmentation within the CRC research network, and beyond. The position will generate substantial visibility for the post holder through the integration into international ultra-high field imaging networks, and requires the ambition to develop into a leading researcher in the field.

Requirements Postdoctoral Researcher

- Completed PhD in computational neuroscience, neuroscience, neurobiology or a related field
- Experience with 3T- and/or 7T structural MRI data analyses (as proved by peer-reviewed publications in internationally renowned journals)
- Strong programming skills and ideally experience with 7T image processing (e.g., segmentation, parcellation, data modelling, multi-modal image processing)
- Experience with analyzing patient data or data of older adults are a plus
- Full-time dedication to the project and strong skills for self-organization and management

Applications of severely disabled people will be preferred in the case of equal professional qualification. The Otto-von-Guericke-Universität aims at increasing gender balance and encourages women to apply.

Please contact Dr. Esther Kühn (esther.kuehn@dzne.de) for questions. Please submit your **application** (CV including list of publications (published and under revision) and list of conference posters, names of two referees, and letter of motivation) within **one pdf-file** to esther.kuehn@dzne.de. Position is open until filled.