



**1 Postdoc position (100%, TV-L 13)
+ 1 PhD position (65%, TV-L 13)
on Human Imaging at Meso-Scale
Starting 01.05.2021**

The positions will be embedded in the **Central Project** of the **Collaborative Research Center (CRC) “Neural Resources of Cognition” (SFB1436)** at the Forschungscampus Magdeburg that uses *in vivo* and *ex vivo* human neuroimaging data to develop biological models on “hidden potentials” of aging brain networks. The positions will be embedded into a vibrant network of interdisciplinary and international researchers that are part of the CRC including the the [Institute for Cognitive Neurology and Dementia Research \(IKND\)](#), the [German Center for Neurodegenerative Diseases \(DZNE\)](#), the [Leibniz Institute for Neurobiology](#), and the [Forschungszentrum Jülich](#). The CRC has access to an MR-PET scanner, three 3 Tesla MRI scanners, one research-only 7 Tesla MR scanner, MEG and EEG systems, and, in the near future, the first 7 Tesla Connectome MR scanner. The positions will be supervised by the members of the Central Project of the CRC composed of Dr. Esther Kühn (head of [Cortical Microstructure Research Group](#)), Prof. Dr. Michael Hanke (head of [Psychoinformatics Research Group](#)), Prof. Dr. Oliver Speck (head of [Institute of Biomedical Magnetic Resonance](#)).

The positions will be based at the [Institute for Cognitive Neurology and Dementia Research \(IKND\)](#) and the [German Center for Neurodegenerative Diseases \(DZNE\)](#) in Magdeburg, Germany, that are unique research centers dedicated to the subject of dementia and all its facets, as well as other neurodegenerative diseases. 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.

We are looking for 1 PhD candidate (65%, salary based on TV-L 13) and 1 Postdoctoral Researcher (100%, salary based on TV-L 13) starting 01.05.2021, until 31.12.2024 for funding period 1 (up to 3 funding periods possible in case of successful evaluation of CRC). The candidates will be integrated into a vibrant team of researchers working on 7T meso-scale imaging in health and disease, and into the widespread research networks of the CRC. The focus of the PhD and Postdoctoral positions will be the development of techniques to analyze multi-modal structural and functional ultra-high field neuroimaging data in humans to understand age- and disease-related changes in older adults at fine-grained detail. The candidates are expected to work in an international and interdisciplinary team, and to drive forward the development of automated techniques for structural and functional 7T data analyses and segmentation within the CRC research network, and beyond. These positions will generate substantial visibility for the position holders via the integration into international ultra-high field imaging networks, and require the ambition to develop into a leading researcher in the field.

Requirements Postdoctoral Researcher

- Completed PhD in computational neuroscience, neuroscience, cognitive psychology or a related field
- Experience with 3T- and 7T-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

Requirements PhD candidate

- Completed Master Thesis in computational neuroscience, neuroscience, cognitive psychology or a related field
- Good programming skills (e.g., Matlab, Python)
- Experience with MRI data analyses

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 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 no later than **15.04.2021**.