

PhD position (f/m/d) in Clinical Computational Neuroscience at the Dept. of Neurology, University of Bonn
starting in September 2022 (or as agreed on)

Description:

You will work in an agile and interdisciplinary team at the Department of Neurology of the University of Bonn, Germany. The Department focuses on clinical research and is among the leading global clinical neurological institutions (rank 20 in Newsweek's worldwide neurology ranking). It is also associated to Germany's largest and most prestigious network of interconnected neurological research institutions, the DZNE (German Center for Neurodegenerative Diseases, with ten sites across Germany). The University of Bonn is an internationally operating research institution, with 200 years of history, around 38,000 students, more than 6,000 employees and an excellent reputation at home and abroad: the University of Bonn is one of the most important universities in Germany. In the last excellence initiative, the University of Bonn was able to secure six Clusters of Excellence, more than any other German institution, for research topics including mathematics and immunology.

In this excellent scientific environment, we investigate in our group biomarkers, brain structure and function in neurodegenerative diseases. We also aim to discover new therapeutic options for these diseases. In consequence, we provide vital research that serves as the basis for improving the living conditions of future patients of neurodegenerative diseases such as Alzheimer's, Parkinson's, and Amyotrophic Lateral Sclerosis. We are intensively collaborating with world-leading experts for mathematics and computer science.

We invite applications for a PhD project on functional brain imaging (fMRI) and personalized transcranial magnetic stimulation (TMS) in neurodegenerative diseases (e.g., Alzheimer's Disease). The PhD candidate will perform neuroimaging and TMS experiments in patients with neurodegenerative diseases and apply dynamic whole-brain models to the resulting neuroimaging data. In accordance with the profile of the department, the PhD project seeks to identify optimal TMS settings for patients with Alzheimer's Disease to improve cognitive function. PhD candidates will be enrolled in the Bonn International Graduate School, [BIGS](#) Clinical and Population Science.

Qualifications and experience of candidates:

We are looking for highly motivated candidates with a Master's degree (or equivalent) in medicine, neuroscience, psychology, biology, computer science, or a related field, and with a strong interest in neurodegenerative diseases and patient-oriented research. Necessary prerequisites are prior experience in programming with Python, demonstrable interest in quantitative research, strong analytical skills, ability for independent, creative and critical thinking, and excellent communication and writing skills in the English language. Prior experience with resting-state fMRI and computational neuroscience is advantageous. Also, German language skills are a plus.

Employment conditions that we offer:

- An inspiring international research environment characterized by a strong focus on academic rigor and publication of results
- Intensive training in both computational neuroscience and clinical research
- A high potential for the individual development of PhD candidates and close supervision and mentoring
- Targeted development of professional skills in a professional career development program
- A position for three years (65% TV-L E13)
- Employment, payment and social benefits are consistent with those at other research institutes

The position is located in Bonn, Germany. Common working language is English and German (English-only candidates possible).

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family friendly university. It aims to increase the proportion of women in areas where women are under-represented and to promote their careers in particular. It therefore urges women with relevant qualifications to apply. Applications will be handled in accordance with the Landesgleichstellungsgesetz (State Equality Act). Applications from individuals with a certified serious disability and those of equal status are particularly welcome.

Interested candidates are asked to send their applications including cover letter, CV with transcripts or degree certificates, a brief motivational statement of research interests and career perspectives, as well as contact details of two referees in a single PDF file to Dr. Xenia Kobeleva (xenia.kobeleva@dzne.de). Deadline for all applications is June 30, 2022 (earlier applications are strongly encouraged). Further questions can be addressed to Dr. Xenia Kobeleva.

If applicants do not wish referees to be contacted without prior notice and consent should indicate this explicitly on their application.