

MRI Physicist (m/f/x)

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Stellenbeschreibung

Faculty of Computer Science:

Center for Theoretical and Integrative Neuro- and Cognitive Science (THINK)

In order to fill a **permanent position in full-time (39.83 hours/week = 100%) at the earliest possible date**, we are looking for 1

MRI Physicist (m/f/x)

The newly established Center for Theoretical and Integrative Neuro- and Cognitive Science (THINK) at Ruhr-University Bochum, set to commence operations in 2025, invites applications for an MRI Physicist (39.83 hours/week, 100% FTE, permanent position) to join our interdisciplinary research team. THINK is committed to advancing an integrated, mechanistic understanding of cognition through interdisciplinary and transdisciplinary research that bridges levels of analysis from neural circuits to behavior and connects cognitive domains from perception to action. Central to this mission is the combined use of human and animal models, enabling comparative research that uncovers shared and distinct neurocognitive principles. To support this approach, THINK provides cutting-edge research infrastructure, including co-located laboratories for human, rodent, and avian studies; a 3T Siemens Cima.X human MRI scanner with 64-channel EEG and tDCS; a 9.4T Bruker MRI scanner for small animals; multiphoton and live-cell imaging microscopes; a high-performance computing cluster; and standardized data acquisition systems. These facilities enable tightly integrated, collaborative research aimed at translating basic science into innovative applications in intelligent systems, neurorehabilitation, education, aging, and mental health. THINK is embedded within the Research Department of Neuroscience and actively contributes to major research consortia at Ruhr University Bochum, fostering a dynamic, globally connected scientific environment. For more information, visit: www.rub.de/think.

We are seeking a full-time MRI Physicist to join THINK as soon as possible. The successful candidate must have a strong technical background in MR physics and will play a critical role in developing and optimizing the operation of our research infrastructure and supporting MRI-based research projects. They will support the research planning phase and help teams create robust and interdisciplinary study designs, deploy hardware solutions, e.g., for stimulus delivery or participant response recording to ensure data reliability and technical accuracy and develop and implement data processing strategies. Ideally they will

advise on experimental design and assess project feasibility within the MRI scanner to maintain high standards in neuroimaging experiments.

Your tasks:

- Develop, optimize, and support multimodal neuroimaging acquisition sequences, including structural and functional MRI, and diffusion-weighted imaging (DWI, DTI, NODDI).
- Monitor and ensure quality assessment and control for neuroscientific MRI, fMRI, and DWI data.
- Training of THINK MRI groups to independently operate the scanner as well as training and advising them in MR safety, procedures, and best practices.
- Participation in interdisciplinary MR-based research activities, writing publications, and giving presentations at national and international conferences.
- Technical supervision, maintenance and regular system checks and quality assurance of the 3T Siemens Cima.X scanner to ensure optimal performance.
- Maintain, update, and install lab equipment, computers, and software for neuroimaging studies.
- Liaise with Siemens engineers for troubleshooting technical issues, maintenance and upgrades.
- Ensure all scanning activities comply with institutional safety protocols and international MRI regulatory standards.
- Manage neuroimaging data using standardized formats (e.g., BIDS), oversee local and cloud-based databases, and facilitate access to computational resources.
- Since a 9.4T animal scanner is available at THINK, we expect a mindset that fosters translating between human and animal (f)MRI data acquisition, experimental design, and data processing techniques to advance the field of cognitive neuroimaging.

Anforderungsprofil & Qualifikationen

Your profile:

- PhD in physics, medical physics, biomedical engineering, chemistry, or related fields, with expertise in human MRI.

- Proven ability to design MRI-based research, including pulse sequence programming, protocol development, and integration with MRI scanner, stimulation code, and data analysis pipelines.
- Demonstrated track record in quality assessment and control of MRI data.
- Experience in designing, conducting, and analyzing human MRI (e.g., fMRI, DWI) ideally focusing on cognitive neuroscience (e.g., learning, brain connectivity, object categorization, cognitive processes) is a plus.
- Publications in peer-reviewed journals as first or senior author. Experience in third-party funding applications is a plus.
- Familiarity with data management of neuroimaging data and formats such as BIDS are required. Willingness in promoting open science and developing data sharing standards are desired.
- Excellent problem-solving skills and analytical skills, independence, initiative, reliability, accuracy, a strong sense of priorities, a high level of responsibility and the ability to work collaboratively in an interdisciplinary, diverse and intercultural, team-oriented research environment.
- Fluent English (C1 level per CEFR) with strong communicative skills. German knowledge is advantageous but not required.
- Interest in and experience with cognitive neuroscience research is a plus as well as experience with combined fMRI-EEG and/or MRI-TMS. Familiarity with neuroimaging analysis software (e.g., SPM, FSL, AFNI, ANTs, BrainVoyager) and scripting (e.g., Python, MATLAB) as well as skills in multivariate pattern analysis (MVPA) or similar methods is a plus.
- Capability to train users to analyze functional and structural MRI data would be an advantage, as well as the ability to develop custom hardware (e.g., coils).

We offer:

- Very dynamic and active research environment
- Challenging and versatile tasks
- Team-oriented collaboration in a committed, international and appreciative team
- Extensive training and further education opportunities
- Flexible working hours and family-friendly working conditions
- Payment and other social benefits in accordance with TV-L
- 30 days paid vacation/year
- Paid time off on Christmas Eve and New Year's Eve
- Company pension scheme

- Employment at one of the largest universities in Germany within the University Alliance Ruhr
- A varied sports program with around 100 sport disciplines and the university's own gym
- Discounts for bike rental systems and bike purchases

Further information:

The position is salaried and based on the collective agreement of the Länder (TV-L). If the personal and collective agreement requirements are met, the employee will receive pay grade E13 TV-L.

Further information can be found at <https://oeffentlicher-dienst.info/> (in German).

The place of work is Ruhr University Bochum.

The application should include a cover letter, describing a) interest in this position, b) what the applicant would bring to THINK, and c) how THINK could contribute to the applicant's career; resume or curriculum vitae; and the names and contact information of three (3) professional references (including name, title, organization, phone number, and email). At least one reference should be the primary supervisor from the applicant's most recent position. All documents should be submitted as a single PDF file. If the position is funded by third-party funds the employee has no teaching obligation.

German language courses are offered by the University Language Center (ZFA) in the field of German as a Foreign Language (DaF).

<https://www.daf.ruhr-uni-bochum.de/sbgk/index.html.en>

The Staff Council has the right to participate in all selection interviews. At the request of a candidate (m/f/x), it will ensure its participation in the entire procedure. Please contact wpr@rub.de.

The Ruhr-Universität Bochum is one of Germany's leading research universities, addressing the whole range of academic disciplines. A highly dynamic setting enables researchers and students to work across the traditional boundaries of academic subjects and faculties. To create knowledge networks within and beyond the university is Ruhr-Universität Bochum's declared aim.

The Ruhr-Universität Bochum stands for diversity and equal opportunities. For this reason, we favour a working environment composed of heterogeneous teams, and seek to promote the careers of individuals who are underrepresented in our respective professional areas. The Ruhr-Universität Bochum expressly requests job applications from women. In areas in

which they are underrepresented they will be given preference in the case of equivalent qualifications with male candidates. Applications from individuals with disabilities are most welcome.

Contact persons for further information:

Dr. Viviana Haase, +49 234 32 27316

Travel costs, accommodation costs and loss of earnings or other application costs for job interviews can unfortunately not be reimbursed.

We look forward to receiving your application via our **online application portal by 2025-07-15**. Please make sure to mention the reference number ANR 4710.

Vorteile für Mitarbeitende

- Vergünstigtes Jobticket
- Arbeitsplatz in lebendiger Metropolregion

Stellenmerkmale

Beschäftigungsart	Wissenschaftliche:r Mitarbeiter:in
Beschäftigungsumfang	Vollzeit (unbefristet)
Home Office	Nein
Bewerbungslink	https://jobs.ruhr-uni-bochum.de/jobposting/4220f17edf54764ef0fd88014e63e21438b6acda?ref=stellenwerk

Kontaktdaten

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Webseite

<https://uni.ruhr-uni-bochum.de/de/stellenangebote>