



JOB VACANCY

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 26 clinics, 23 institutes and specialized centers. The over 6.000 employees offer medical care with state-of-the art diagnostics and therapies, which meet highest international standards. Patient care is connected with basic and translational research at an internationally competitive level.

The **Division Clinical Neurosciences** (Head: Prof. Dr. U. Bingel) **of the Department of Neurology at the University Hospital Essen** is currently seeking a

PhD (m/f/d)

(E13 TV-L / 75% - temporary employment)

The pay grade classification depends on the personal and collective legal requirements. The employment is provided for the duration of a third-party funded project until June 30th, 2024.

During that period, it is desired to obtain a PhD degree. The successful applicant will work within a large interdisciplinary collaboration of international top-class scientists within the field of treatment expectation and placebo research.

Description of duties:

- Developing procedures for data harmonization and consolidation within a unique, large-scale, multi-center prospective brain imaging database
- Enhancement of MRI-processing workflows for brain connectivity analysis
- Development of dedicated feature engineering approaches for brain network data
- Application of "brain-decoding" techniques via machine learning, based on resting-state and task-based connectivity
- Writing and publishing of scientific articles

Your qualifications:

- University degree (master or diploma) in Computer Science, Applied Mathematics or Physics; eligible candidates from other disciplines are also encouraged to apply
- Programming / software development experience, preferably with Python, but also R, Matlab, bash and other languages are considered
- Experience in any of the following fields is considered an advantage:
 - analysis of biomedical data, particularly functional and structural MRI
 - machine learning ("classical" approaches, neural networks, cross-validation)
 - high-performance computing, kubernetes, DevOps skills
- Strong oral and written communication skills in English

We offer:

- Working in an agile, highly interdisciplinary environment in a recently established junior research group (<https://pni-lab.github.io>), which is part of the newly established "Institute for Artificial Intelligence in Medicine", (<https://ai.uk-essen.de>) and the Bingel-Lab (https://www.uk-essen.de/clinical_neurosciences_bingel/)
- Being embedded in the central scientific project of the Collaborative Research Center SFB/TRR 289 (Treatment Expectation), funded by the "Deutsche Forschungsgemeinschaft"
- Strong networking opportunities within the international scientific community
- Excellent research facilities: retrospective imaging data, 3T/7T MRI scanners, high performance computing (+GPU cluster) and a dedicated in-house software code-basis
- Enrollment in the structured PhD graduate program "BIOME" (Graduate School of Biomedical Science) with regular activities for early career scientists

The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply.

The participation in secondary employment depends on the „Hochschulnebenbeteiligungsverordnung“ of North-Rhine Westphalia.

Disabled applicants will be preferentially considered in case of equivalent qualification.

Please send your application (including a one-page motivation letter with focus on experience in relevant topics, a full CV, and contact information of two references) with reference to the tender number **910** - preferably by e-mail - to:

Dr. Tamas Spisak

Institute for Diagnostic and Interventional Radiology and Neuroradiology

University Hospital Essen

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D-45147 Essen

GERMANY

E-Mail: tamas.spisak@uk-essen.de

We use your data exclusively for application purposes in accordance with the applicable data protection regulations.

Further information can be found in the privacy statement on our homepage at: <http://www.uk-essen.de>