Universitätsklinikum Essen

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

Postdoc (m/f/d) in Brain Imaging with Focus on Large-Scale Multi-Center Predictive Modelling in Pain and Placebo

(E13 TV-L / 100% - 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.

The position is related to a large interdisciplinary collaboration center in which international top-class scientists from the field of expectation and placebo are involved. The successful candidate will perform integrative analysis on the unique, large-scale neuroimaging database of the collaboration center and apply predictive modelling to characterize the individual effects of treatment expectations on health outcomes.

Description of duties:

- Managing the harmonization and consolidation of a unique, large-scale, multi-center prospective multimodal database (including imaging, behavioral data, etc.)
- Enhancement of MRI-processing workflows for brain connectivity analysis
- Development of dedicated feature engineering approaches for multi-center modelling
- “Brain-decoding” via machine learning, based on structural and functional (resting-state and task-based) connectivity
- Evaluating the neuroscientific validity of the developed predictive models

Your qualifications:

- Candidates with a PhD-degree from a wide spectrum of disciplines (neuroscience, psychology, computer science, etc.) are encouraged to apply
- Documented research experience with publications in peer-reviewed journals
- Experience with functional, structural and diffusion-weighted MRI and related software
- Programming skills (e.g. Python, R, Matlab, bash)
- Additionally, the ideal candidate has experience in at least two of the following three fields:
    - Research in a relevant biomedical background (pain, affective disorders, expectations, placebo).
    - Machine learning and/or large-scale data analysis.
    - Brain connectivity analysis
- Strong oral and written communication skills in English

UNIVERSITÄT DUISBURG ESSEN

Offen im Denken

We offer:

- Working in an agile, highly interdisciplinary environment, in a recently established junior research group for predictive neuroimaging (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/)
- Central role within the Collaborative Research Center SFB 289 (Treatment Expectation), funded by the ‘Deutsche Forschungsgemeinschaft’
- Strong networking opportunities within the international scientific community
- Opportunity to co-supervise PhD and gradual students
- Excellent research facilities: access to retrospective imaging data (Placebo Imaging Consortium: https://placebo-imaging-consortium.github.io), 3T/7T MRI scanners, high performance computing (+GPU cluster) and a dedicated in-house software code-basis

The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply.
The participation in secondary employment depends on the „Hochschulnebentätigkeitsverordnung“ of North-Rhine Westphalia.
Disabled applicants will be preferentially considered in case of equivalent qualification.
The position is also available as part-time employment.

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 **911** - preferably by e-mail - to:

Dr. Tamas Spisak
Institute for Diagnostic and Interventional Radiology and Neuroradiology
University Hospital Essen
Hufelandstraße 55
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