

## Job Vacancy

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 30 clinics, 27 institutes and specialized centers. The over 8.000 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.

### Research Associate (Postdoc) RF Coils in UHF MRI (m/f/d)

(pay grade: EG 13 TV-L)

**Work Area:** Research group High-Field and Hybrid MR-Imaging (Univ.-Prof. Dr. Harald H. Quick) of the University Hospital Essen - located at the Erwin L. Hahn Institute for Magnetic Resonance (ELH)

**Job ID:** 11508

**Start Date:** Next possible date

**Work Scope:** Full-time / 38,5h

**Contract Type:** Limited

**Contract duration:** 30.09.2027; in accordance with § 2 (2) WissZeitVG for the duration of the project

**Contact:** For further information please contact: Prof. Dr. H.H. Quick, PhD, Head of the research group High-Field and Hybrid MR Imaging and Director of the Erwin L. Hahn Institute for MRI, via Email: [harald.quick@uk-essen.de](mailto:harald.quick@uk-essen.de); Homepage: [www.hahn-institut.de](http://www.hahn-institut.de)

#### Your tasks:

- You will work on the DFG-funded **project "NeuroBOOST: Novel Parallel-Transmit Head/Neck RF Array Coils for Ultra-High Field MRI at 7T, 9.4T, and 11.7T"** which aims to develop, simulate, build, and evaluate a new radiofrequency (RF) head/neck antenna (coil) for 7-Tesla ultrahigh field MRI
- You will work on the **development of a new RF head/neck coil for the 7-Tesla MRI system at the ELH Institute**
- Depending on your experience and skills, the specific tasks in this project may include the entire development process from **RF simulations to mechanical design and construction of the coil housing, electrical design of the RF transmit (Tx) and receive (Rx) elements**
- **RF signal homogenization** using the available 8-channel pTx system
- **RF coil integration on the 7T system and safety testing** are further tasks in this project

#### Your profile:

- Finished Dissertation (Postdoc) in physics, medical sciences, nature sciences, (electrical) engineering or comparable qualification
- Strong background and **practical experience with RF coil simulation tools for MRI** (e.g. CST Microwave Studio)
- Strong background and **experience with (UHF) magnetic resonance**
- **Experience with the development of RF coils** (transmit and receive) for MRI

- **Experience with RF signal homogenization** using multichannel pTx systems
- Programming skills and **experience with (Siemens) MR Sequence development** is a plus
- Very good communication skills and good command of English in both, oral and written form
- Good communication skills and command of German in both, oral and written form is a plus

#### **Look forward to:**

- The ELH Institute since 2006 is among the world leading institutes for UHF MRI and RF coil development
- The ELH is equipped with a new and state of the art 7-Tesla MRI system
- The ELH features a well-equipped RF lab and mechanical workshop with all necessary testing equipment, facilities, and tools to build RF coils for MRI; including: network analysers, electrical circuit routers, two new 3D printers with large printing volumes for professional RF coil housings, etc.
- The position is embedded in a great research team and UHF MRI environment
- This DFG-funded research project is scientifically ambitious and offers an excellent research platform for an engaged Postdoc scientist for academic career development
- A secure job in the public service of the state of NRW
- Fair payment in accordance with the collective wage agreement (TV-L) incl. annual bonus payment and supplementary company pension scheme
- 30 days of vacation per calendar year (for a full-time position)
- Interdisciplinary work with colleagues from other departments
- Working with modern equipment and certified quality standards
- Family-friendly corporate culture, e.g. company daycare center, vacation program for schoolage children, advice and support from the Employee Service Office in all life situations
- Wide range of training and continuing education opportunities, e.g. at the Training Academy of UK Essen
- Health Management, e.g. company integration management, vaccinations, promotion of sports activities
- Attractive fringe benefits, e.g. reduced-price canteen meals, community events, accommodation in student residences

#### **General conditions:**

- The pay grade classification depends on the personal and collective legal prerequisites.
- The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply.
- Disabled applicants will be preferentially considered in case of equivalent qualification.
- A certificate according to § 23a Infection Protection Act (IfSG) about the vaccination and serostatus regarding measles is required.
- The position is also available as part-time employment.

**Contact person and further information about the position:**

You will find detailed information on the job advertisement and contact persons behind the button - Apply now:

<https://bewerbung-karriere.ume.de/Vacancies/11508/Application/CheckLogin/1>

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: [www.uk-essen.de](http://www.uk-essen.de).