



The German Cancer Research Center is the largest biomedical research institution in Germany. With more than 3,000 employees, we operate an extensive scientific program in the field of cancer research.

The Division of **Medical Physics in Radiology** is seeking a

## PhD Candidate for Diffusion MRI using a local breast gradient coil

(Ref-No. 2022-0378)

### Job description:

At a recently installed 3 Tesla MR scanner of the DKFZ, a local gradient coil with ultra-high amplitude for imaging of the female breast will be set up. Your research work will encompass:

- Participation in the development of the hardware integration to the main MRI system
- Development of first diffusion-weighted MRI sequences by combining the local gradient coil with the whole-body gradient system
- Accounting for gradient field inhomogeneities, eddy currents and concomitant fields
- Applications using advanced diffusion-weighted imaging sequences including time-dependent diffusion measurements and the use of non-conventional gradient profiles

### Requirements:

Successful candidates will become members of a multidisciplinary international team and should:

- hold a graduate degree (master's / diploma) in physics, engineering, or a related scientific or technical field,
- possess keen interest in scientific research and be able to work independently,
- have good oral and written communication skills in both German (ideal) and English (mandatory).

Experience in MR physics including pulse sequence programming (preferred: C/C++, IDEA, MATLAB / Python) and hardware development would be beneficial but is not a prerequisite.

### We offer:

- Interesting, versatile workplace
- International, attractive working environment
- Campus with modern state-of-the-art infrastructure
- Access to international research networks
- Doctoral student payment including social benefits
- Flexible working hours
- Comprehensive training and mentoring program through the Helmholtz International Graduate School

The position is limited to 3 years.

### Important notice:

The DKFZ is subject to the regulations of the Infection Protection Act (IfSG). As a consequence, only persons who present proof of immunity against measles as well as against COVID-19 may work at the DKFZ.

**For further information** please contact  
Prof. Dr. Mark Ladd, phone +49 (0)6221/42-2550.

The DKFZ is committed to increase the proportion of women in all areas and positions in which women are underrepresented. Qualified female applicants are therefore particularly encouraged to apply.

Among candidates of equal aptitude and qualifications, a person with disabilities will be given preference.

To apply for a position please use our online application portal ([www.dkfz.de](http://www.dkfz.de)).

We ask for your understanding that we cannot return application documents that are sent to us by post (Deutsches Krebsforschungszentrum, Personalabteilung, Im Neuenheimer Feld 280, 69120 Heidelberg) and that we do not accept applications submitted via email. We apologize for any inconvenience this may cause.

