

PhD Position

MR Physics & Image Reconstruction for Low-Field MRI

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We are seeking a Doctoral Researcher to expand our Low-Field Magnetic Resonance Imaging (LF-MRI) group at the Chair of Imaging and Computer Vision. In collaboration with Fraunhofer MEVIS, we develop next-generation portable MRI systems by combining innovations in hardware, electromagnetic simulation, RF technology, and physics-informed AI for image reconstruction and noise cancellation. As one of the most promising directions in medical imaging, LF-MRI has the potential to bring MRI to the point of care, enabling new applications in primary care, and in mobile healthcare settings.

Your Key Responsibilities

- Optimize MR pulse sequences for portable LF-MRI systems to improve image quality, acquisition speed, and quantitative imaging performance.
- Develop MRI digital twins for rapid sequence prototyping, optimization, and AI-driven sequence design.
- Investigate advanced image reconstruction algorithms, including physics-informed and AI-based approaches that incorporate LF-MRI specifics.
- Collaborate in an interdisciplinary research environment.

Your Profile

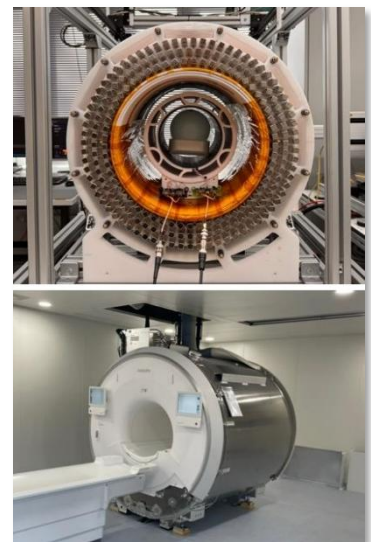
- An excellent master's degree in physics, electrical engineering or a related field.
- Strong expertise in MRI physics; solid experience in Python Programming and Simulation environments.
- Independent and self-motivated, with a strong collaborative mindset.
- Passionate about advancing medical imaging through innovation.

What We Offer

- An excellent collaborative, interdisciplinary research environment with leading scientists.
- Access to state-of-the-art low-field MRI and commercial MRI systems.
- Opportunity to shape next-generation MRI solutions and contribute to high-impact publications.
- A full-time position (TV-L) and RWTH employee benefits.

Applications

Applications should be submitted by email by 1 September 2026 for the current application round. Please use the subject line "LFMRI_MRphysics_PhD_{LastName}" and include a CV, academic transcripts, a statement of research interests, and, if available, links to publications, thesis work, or code repositories.



*Top: Our own LF-MRI scanner.
Bottom: Our 1.5T MRI scanner.*