

At the Chair of Imaging and Computer Vision, we explore and extend the physical, methodological, and computational limits of modern medical imaging technologies and related domains. Our research spans simulation of novel imaging concepts, hardware prototyping, high-speed data processing, and image reconstruction, complemented by machine and deep learning-based methods for image enhancement, quantitative analysis, and diagnostics. Combining physics-driven and data-driven approaches, we develop next-generation imaging solutions using our in-house systems. Our multidisciplinary team of physicists, engineers, and computer scientists collaborates closely with industry partners and RWTH Aachen spin-offs, ensuring that research outcomes lead to practical impact.

Postdoctoral Research Fellow in Advanced Low-Field MRI

Low-Field Magnetic Resonance Imaging (LF-MRI) is emerging as one of the most transformative directions in medical imaging. By dramatically reducing system cost, complexity, and infrastructure demands, LF-MRI has the potential to bring MRI from specialized clinical centers to point-of-care and global health applications. At the same time, it creates new opportunities for breakthroughs in hardware design, data acquisition, and intelligent image reconstruction.

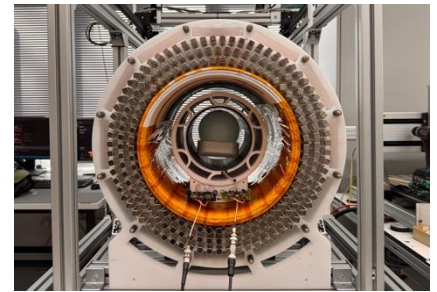
As a Postdoctoral Researcher Fellow, you will join a collaborative team our chair, working closely with Fraunhofer MEVIS to advance the next generation of LF-MRI technology. The research combines system-level innovation - novel gradient, RF and B₀ concepts, low-noise acquisition with advanced algorithmic approaches, including AI-driven reconstruction, physics-informed modeling, and adaptive signal processing. Together, these developments aim to redefine the performance limits of LF-MRI and establish it as a powerful, accessible, and scalable imaging modality for the future of healthcare.

Your Key Responsibilities:

- Develop and optimize hardware components to maximize signal sensitivity.
- Investigate multi-channel and resonance-based techniques for improved imaging.
- Implement AI-driven signal enhancement strategies.
- Collaborate in an interdisciplinary research environment.

What We Offer:

- An excellent collaborative, interdisciplinary research environment with leading scientists.
- Exciting research opportunities in cutting-edge magnetic imaging technologies.
- 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.



Top: Our own low-field MRI scanner;
Bottom: our commercial 1.5 T MRI scanner.

Your Profile:

- PhD in MRI or a related field with a focus on system innovation.
- Solid expertise in B₀/gradient design, RF coils, data acquisition, and image reconstruction.
- Highly independent and self-motivated, with a strong collaborative mindset.
- Passionate about advancing medical imaging through innovation.