

Two PhD Positions in Magnetic Resonance Imaging Methodology

The Department of Diagnostic and Interventional Radiology at the Technical University of Munich (TUM) invites applications for **two PhD positions** in methodological developments for quantitative Magnetic Resonance Imaging (MRI). The main aim is the development of novel pulse sequences, image reconstruction, signal modeling and post-processing methods for improving the specificity of the MRI biomarkers of white and brown adipose tissue. The first position will focus on multi-parametric imaging of brown adipose tissue and the second position will focus on motion robust fat imaging. The projects are embedded within the multi-disciplinary research program of the newly funded Research Unit from the German Research Foundation (DFG) “iMAGO – Personalized diagnostics for the treatment of obesity” (https://www.dfg.de/en/service/press/press_releases/2021/press_release_no_52/index.html).

The Radiology Department is equipped with four MRI scanners, including one whole-body 3 T Elition Philips MRI, which is dedicated for research. The student will be part of the Body Magnetic Resonance Research Group in the Radiology Department (<http://www.bmrrgroup.de/>) and will be closely working with the researchers of the iMAGO Research Unit and with radiology, nutrition and molecular biology colleagues within the TUM University Hospital (Klinikum rechts der Isar) and the TUM School of Life Sciences. The funding for the positions is intended for the entire duration of the PhD (up to 4 years) and the positions are available immediately. The employment is in accordance with TV-L (German Salary Grade 75% TV-L E13)

Applicants should hold a Masters (diploma) degree in Physics, Medical Physics, Biomedical Engineering, Electrical Engineering or in an area related to Medical Imaging. A solid background in signal processing, excellent programming skills in C/C++ or MATLAB/Python and previous experience with data acquisition and analysis are required. The applicant should have good communication skills and be willing to work as a part of an interdisciplinary team of engineers, physicists, biologists and clinicians.

Applications should include (in a single pdf): a cover letter, a curriculum vita, if applicable a list of publications, Bachelor and Master (or diploma) transcripts (including a detailed list of classes and grades obtained) and two references (contact details only) and should be submitted before 31.01.2022. The positions will remain open until filled. All materials should be sent electronically to:

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