LMU KLINIKUM

Promotionsstelle MR Physik (m/f/d)
Klinik und Poliklinik für Radiologie

The Hospital of the University of Munich, Germany, is one of the largest and most competitive university hospitals in Germany and Europe. 48 specialized hospitals, departments and institutions harbouring excellent research and education provide patient care at the highest medical level with around 11.000 employees.

Workplace	Campus Großhadern	Date of entry	01.01.2025
Working hours	Part time	Application deadline	01.12.2024
Institution	Klinik und Poliklinik für Radiologie	Reference Number	2024-K-0559
Department	Klinik und Poliklinik für Radiologie – MRT-Physik		

Scope of duties

- The aim of the project is to develop and improve techniques for qualitative and quantitative lung MR imaging and, in particular, the implementation of methods for the assessment of quantitative pulmonary perfusion and ventilation parameters based on dynamic proton-density-weighted acquisitions.
- The group has extensive experience with various approaches of Fourier-decomposition lung MRI techniques at 1.5 and 0.35 T.
- In this project, these techniques will be modified to extend the anatomical coverage using highly accelerated MR acquisitions and additional evaluation algorithms such as the matrix-pencil decomposition.

Our requirements

- You have an excellent M.Sc. or equivalent degree in physics or medical physics.
- Solid programming and data processing skills in python and previous experience in medical imaging or biophysics are highly desirable.
- Prior knowledge of MRI and programming/implementation/optimization of MRI pulse sequences are beneficial.
- In order to carry out the project, you must be willing to familiarize yourself intensively with related topics, including the physics and technology of MRI (pulse sequence optimization and implementation), image data processing, basics of lung physiology, and implementation of pulmonary ventilation and perfusion models.
- Capability of independent self-motivated work as well as very good English and communication skills are required.
- Application details: Applications should include a curriculum vitae, certificates and transcripts of academic degrees, a letter of motivation detailing the applicant's research interests, and contact information for 2 references. The position can be filled immediately.

Our offer

- The PhD position is under supervision of Prof. Dr. Dr. Olaf Dietrich, MRI Physics, Department of Radiology, LMU University Hospital, Munich, Germany.
- The MRI Physics group focuses on research and technical development in the field of magnetic resonance imaging (MRI) and quantitative imaging.
- We offer the candidate an interesting and challenging position in an interdisciplinary research group, embedded in a translational scientific environment and in close cooperation with the clinicians and medical scientists of the department of radiology and of the German Center for Lung Research.
- The position includes the possibility of national and international cooperations, the participation in international congresses, as well as a friendly, supportive, and inspiring working environment.
- The radiology department has several MRI systems with 1.5 or 3 Tesla.
- A large amount of functional lung MRI data acquired at 1.5 T and at low field strength (0.35 T) is already available providing a starting point for this research project.
- The position is funded by the German Center for Lung Research (Deutsches Zentrum für Lungenforschung, DZL).
- The position is limited to three years.
- Remuneration is based on the Collective Agreement for the Public Sector of the Länder (TV-L) including all allowances customary in the public sector.

Offers and services of the employer

- Further education and training
- Company pension scheme
- Childcare services
- Mobile work (if suitable)
- Job ticket
- Discounts
- Staff accommodation (if available)

Prof. Dr. Dr. Olaf Dietrich

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089 / 4400 – 73620

Application format

Please use the Online-Form for your application

http://www.lmu-klinikum.de/d1735cbc4f4076e6

Disabled persons will be preferentially considered in case of equal qualification. Presentation costs cannot be refunded.

Please note that we cannot reimburse travel expenses incurred through interviews.

We ask you for your understanding that postal applications will not be returned, but will be destroyed in accordance with data protection regulations. The data usage information also applies to postal applications