Klinikum rechts der Isar
Technische Universität München

PhD student position in PET/MRI reconstruction

Nuclear Medicine Department at Klinikum rechts der Isar/TUM (Munich, Germany)

The Department of Nuclear Medicine at TUM is operating PET/CT, PET/MR, SPECT and SPECT/CT systems for clinical imaging as well as PET/CT and MRI for preclinical studies. Strong interdisciplinary research activities in multimodal imaging are focusing on oncological, neurological, and cardiological questions.

Our group has experience on PET image reconstruction for clinical and pre-clinical scanners, motion and attenuation correction, PET and MRI quantification techniques including kinetics modeling, high-resolution PET detectors, and system design.

We have in the department a Siemens Biograph PET/MRI scanner, routinely used for a number of clinical applications. We are currently implementing an in-house PET image reconstruction toolkit to integrate with the simultaneously acquired MRI data to increase the image quality. In parallel, we are seeking to implement a joint PET/MRI reconstruction algorithm to exploit the simultaneous acquired information from the scanner.

Within this project, the PhD candidate will interact with highly motivated physicians, who will identify the clinical questions to be tackled by the novel software developments.

We are looking for a talented and highly motivated individual to join our group for this challenging project. The candidate will mainly work on the software developments including PET and MRI reconstruction. Some knowledge about PET physics and/or MR physics, and Monte Carlo simulations will be useful.

The successful candidate must have a relevant MSc degree (or equivalent), e.g. in the field of computer science, physics or engineering. A strong background in mathematics and programming is required. Good level of English and the ability to work in a team are essential. Knowledge of German is not required.

The application should consist of a letter describing the applicant, her/his background and research interests, 2 academic references as well as a CV and copies of academic grades.

For more information, please contact: Dr. Jorge Cabello, e-mail: jorge.cabello@tum.de

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