

Doctoral Candidate 6 - qMRI reconstruction with intra-scan motion compensation, uncertainty estimation, and segmentation

Host Institution	Erasmus MC, The Netherlands
PhD enrolment	Erasmus MC, The Netherlands
Primary Supervisor	Dr. Dirk Poot, Dept. of Radiology and Nuclear Medicine
Subject area	MR Physics, use of AI techniques

About this doctoral project and your tasks

There are several promising quantitative MRI techniques of which the clinical adoption is hindered by long scan times. To address this, you will develop a **qMRI reconstruction framework for novel, highly accelerated, acquisitions**. In this framework subject motion should be compensated to increase the number of successful scans and remaining uncertainty should be estimated to support clinical reasoning and hence aid clinical acceptance.

Your tasks will include :

- Sequence setting optimization
- Designing and implementing a DL architecture for qMRI reconstruction
- Write scientific papers
- Present at scientific conferences

Foreseen secondments

For this project, we foresee secondments to:

- Prof. dr. Daniel Rueckert (3 months) at **Technische Universität München** (Germany)
- Prof. dr. Jan Sijbers (3 months) at **University of Antwerp** (Belgium)
- Dr. Timo Schirmer (3 months) at **GE Healthcare** (Germany)