

Master project MRI-linear accelerator at the NKI

To Medical Natural Sciences students that are looking for an internship

Recently, the Unity MR-linac has been introduced at the Netherlands Cancer Institute. This is a hybrid machine combining an MRI with a linear accelerator which allows to scan patients daily while they are receiving radiation treatment. The integrated MRI has the possibility to acquire functional images, which tell something about the properties of underlying tissue. This can potentially be used to measure treatment response early on.

As patients are scanned daily, a large amount of image data containing anatomical and functional information of different tumor sites is available.

The project will consist of analyzing these data in order to determine the feasibility of measuring treatment response on the MR-linac for different tumor sites as well as looking for meaningful trends over the course of treatment. As we have large amounts of data available, a specific project aim can be defined together.

We are looking for a master's student who wants to do their final project with us. You are highly motivated, your interests lie with image analysis, MR physics, and radiation oncology. According to your preferences, the project can be tailored to focus on MR physics, image analysis techniques, or machine learning/deep learning. We provide a desk at our department, an enjoyable working place (weekly borrels!), and supervision according to the MNS requirements.

If you are interested, feel free to contact me by email: e.kooreman@nki.nl