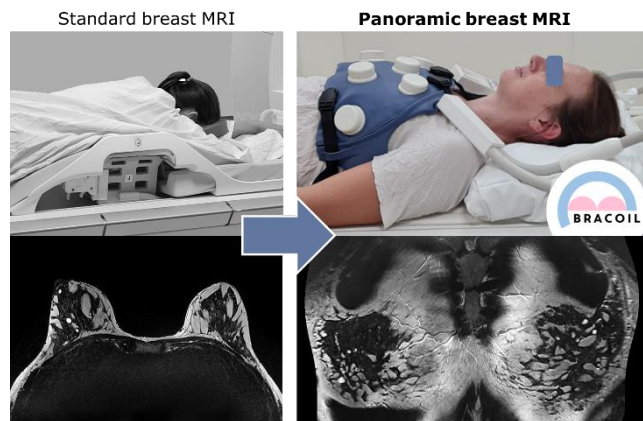


## Master thesis in the field of medical image processing and medical visualization

We are looking for a master student (informatics, mathematics or biomedical engineering) for the development of an image processing and visualization solution to enhance the readability of MRI images.

The thesis is part of an ongoing breast imaging study evaluating a newly developed MRI hardware "BraCoil": <https://physicsworld.com/a/wearable-coil-vest-could-change-the-game-in-breast-mri/>



With current visualization techniques, the image viewing is inefficient as the target region is bent. The goal of this interdisciplinary master thesis project is to design software, which automatically calculates the reformation of the acquired MRI images enabling to view and navigate through the data in a panoramic visualization. The aim of this project is to support radiologists in the localization of breast lesions. Your task will be to (1) identify the region of interest and implement an optimal reformation method minimizing distortion artefacts (2) design and implement appropriate visualization methods combining 2D and 3D visualizations allowing a synchronized navigation through the original and reformatted volumes. (3) Evaluate the results quantitatively and qualitatively.

This project is a collaboration between the Center for Medical Physics and Biomedical Engineering, Medical University of Vienna and the Biomedical Image Informatics Group at VRVis, Zentrum für Virtual Reality und Visualisierung Forschungs-GmbH (<https://www.vrvis.at>).

Students from TU Wien will be co-supervised by Prof. Renata Raidou, Institute of Visual Computing & Human-Centered Technology.

We are looking forward to your application!

Please send us your application including your CV to [raphaela.czerny@meduniwien.ac.at](mailto:raphaela.czerny@meduniwien.ac.at) or [buehler@vrvis.at](mailto:buehler@vrvis.at)

