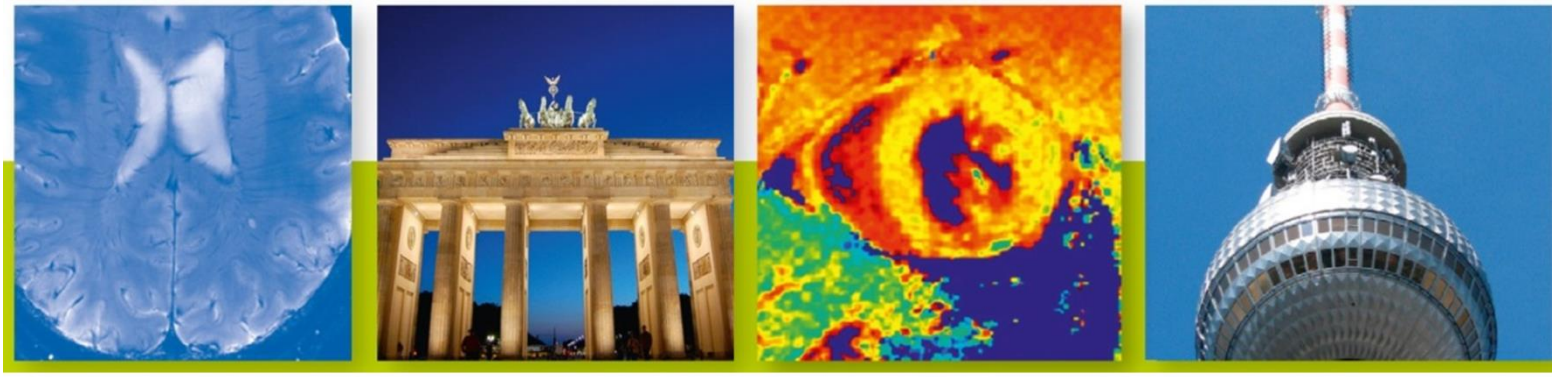

Max Delbrück Center for Molecular Medicine
in the Helmholtz Association, Berlin, Germany

The Berlin Ultrahigh-Field Facility (B.U.F.F) is seeking a scientist for a

PhD project

Ultrasensitive Fluorine Magnetic Resonance Imaging

Background

Magnetic resonance imaging (MRI) using fluorine (19F) instead of protons (1H) as the signal source opens up a range of exciting new opportunities, e.g. for tracking labeled cells. A major challenge for 19F-MRI is its sensitivity, since the amount of fluorine in the organ / soft tissue is typically several orders of magnitude lower than that of protons (water). We have successfully attracted funding for a research project that aims to ***develop the world's most sensitive 19F-MRI technique*** here at the Berlin Ultrahigh Field Facility (B.U.F.F.) by creating a unique combination of cutting edge data acquisition hardware, acquisition methods, and post-processing strategies.
This PhD project will involve ***development/implementation and optimization of methods for MR data acquisition and post-processing while making best use of our innovative hardware***. It involves the testing/evaluation of these methods as well as the collaboration with other researchers whose work focuses on improving cell labeling and applying the novel MR technique to non-invasively study the migration of cells in the living organism. Ultimately our research aspires to help the development of cell therapies for patients.

Requirements

We are looking for a candidate with a genuine interest in advancing the technological capabilities of molecular and cellular MRI beyond their current limitations. Besides good software programming and mathematical skills the candidate is expected to be able to work independently under supervision and be enthusiastic about a collaborative environment. Applications are welcome from candidates of different disciplines, such as physics, biomedical engineering, electronic engineering, computer science, etc.

The Max-Delbrück-Center for Molecular Medicine is an equal opportunity employer.

Contact

Dr. Andreas Pohlmann, andreas.pohlmann@mdc-berlin.de