2 PhD positions in preclinical and/or translational MRI

Open PhD positions in preclinical and/or translational MRI to be filled at the Hybrid MRI Physics Group at the Clinic for Radiology at University Hospital Muenster, Germany.
We are an interdisciplinary team consisting of physicists, biologists and medics working on the development of novel MRI techniques to study the pathogenesis and treatment of cardiovascular and renal diseases in animal models and in patients.

Two 3-year PhD positions (65% E13) for a physicist, engineer, chemist, biologist or candidates from related fields

position one: with interest in multimodal MRI applications (T_1 and T_2 mapping, perfusion, diffusion tensor, CEST, 4D flow)
and with background in one or more of the following fields:
• MRI contrast agents
• Drug delivery systems
• Cell cultivation
• Cell labelling and tracking
• Animal models of cardiovascular and renal diseases (e.g. aortic stenosis, endocarditis, renal injuries)
Start date October/November 2021

position two: with good programming skills (e.g., Matlab, python, C++)
and with interest in developing novel multimodal MRI techniques to diagnose cardiovascular and renal diseases. Experience in one or more of the following fields is a plus:
• Pulse sequence programming (Bruker or Philips or Siemens)
• Image reconstruction
• Image analysis/simulations
• B1, B0 and motion correction
• 4D flow, diffusion tensor, CEST, T_1 and T_2 mapping
Start date October/November 2021

Available instrumentation:
9.4 T MRI system (Bruker Biospec with cryoprobe), 3T PET/MR scanner (Siemens), 3T MR scanner (Philips), mouse facility, microbiology and biochemical lab, compute server for data analysis and simulations.

Access to instrumentation in other groups: fluorescence imaging systems (with X-ray), bioluminescence, ultrasound, photoacoustic, small animal PET and small animal Micro-CT.

Applications and further information:
Priv.-Doz. Dr. rer. nat. Verena Hoerr (Dipl. Phys.)
Clinic for Radiology, University Hospital Muenster, Germany
vhoerr@uni-muenster.de
See also
https://www.medizin.uni-muenster.de/en/ag-hoerr/research-group.html