Post-doctoral Fellow/Research Associate

The University of Missouri Columbia NextGen Imaging facility and Department of Radiology has an opening for a post-doctoral fellow or Research Associate with interests in brain or orthopedic imaging in advanced MR development and application.

The NextGen facility opened its doors in October 2021, and has since moved quickly to establish high performance research and clinical imaging based on its 7T Terra and 3T Vida systems. Our group has demonstrated successful strategies in advancing the limits of ultra-high field B0 shimming and RF performance and are implementing these in multiple clinical and research projects. The Terra is equipped with parallel (8 channels, 2kW each) and single transmit consoles with multinuclear option; Nova sTx 1/32 and pTx 8/32 head coils, Resonance Research Inc. (RRI) 8x2 transceiver, QED 28channel knee coil, 23Na and 31P coils; the whole body state of the art gradient coil at 80mT/m Gmax and 200T/m/s slew rate. Functionalities include access to high accuracy field shimming with Bolero/Bobi, a joint project between UM and RRI, operational use of the Siemens FIRE pipeline, and full electromagnetic solvers with multiple tissue models with Sim4Life for coil development. Interests within the group include spectroscopic imaging, ASL and perfusion, and non-cartesian sampling. A very high order shim insert providing 3rd, 4th and partial 5th order spherical harmonic corrections (RRI) is routinely used for spectroscopy and imaging studies. At the facility are 5 faculty, with experience ranging from ultra high field human brain imaging, RF coil development and simulation, spectroscopy and spectroscopic imaging to animal studies of aging and dementia.

Required qualifications:

PhD in Biophysics, MRI Physics, Electrical or Bioengineering or related field with at least 2 years of MR research experience in acquisition methods, sequence or pulse design, fast imaging or spectroscopic imaging. Experience in MR data analysis using Matlab is necessary, and pulse programming (Siemens IDEA), C++, and/or Python is very helpful. With the Mizzou Forward campaign, candidates with outstanding experience, interest and innovation will be able to progress to faculty positions as appropriate. Please send letter of interest and CV to JW Pan MD PhD, Director of 7T, Department of Radiology, University of Missouri Columbia, panjw@health.missouri.edu.