



Postdoctoral Fellowship Positions for (1) Quantitative MRI and (2) Artificial Intelligence

About the Positions

We are looking for enthusiastic, self-motivated individuals who are able to work independently in a collaborative multidisciplinary team. The successful candidates will work closely with Dr. Yongsheng Chen, on the following ongoing projects: 1) Multiparametric quantitative MRI imaging biomarkers in neurodegenerative diseases (Parkinson's Disease, Multiple Sclerosis) and brain tumors. 2) Multiparametric quantitative MRI of peripheral nerves for developing monitoring biomarkers in patients with peripheral neuropathies. 3) Automated segmentation of deep grey matter nuclei, skeletal muscle, and peripheral nerve fascicles using machine learning. 4) Quantitative MRI of mice sciatic nerve in vivo to monitor demyelination and axonal loss over time. The successful candidates are highly encouraged to apply for NIH K grants with full support from the team with expertise in MR physics, Radiology, Computer Science, Myelin Biology, Clinical Neurology, and Cancer Biology. The positions are secured by funds from NIH and Wayne State for a two-year period with **very competitive compensation**. Third-year support is available depending on the fellow's performance.

Qualifications

- PhD in Biomedical Engineering, Physics, Computer Science, or similar programs.
- Experience in MRI, MATLAB programming, Python programming, and Statistical Analysis.
- Experience in Siemens MR pulse sequence programming, quantitative MRI methods, clinical research using qMRI, and deep learning-based medical image segmentation is preferred.

MR Core Research Facility at Wayne State

The MR Core Research Facility (MRRF) at Wayne State has focused on developing novel MRI methods and applications in neurodegenerative disorders led by Prof. E. Mark Haacke over the past 20 years. These technical developments include, to name a few: susceptibility weighted imaging (SWI), methods for magnetic resonance angiography (MRA), methods for quantitative susceptibility mapping (QSM), and more recently a multiparametric quantitative MRI method for fast imaging of the brain and peripheral nerves referred to as strategically acquired gradient echo (STAGE) imaging. The MRRF operates research dedicated human 3T scanner (**Siemens MAGNETOM Cima.X**), and a preclinical 7T scanner (**Bruker BioSpec, ParaVision 360 software**).

To apply, please send a one-page cover letter, full CV, and contact of two references to:

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