Position Description

A Postdoctoral Associate position in magnetic resonance imaging (MRI) of musculoskeletal disorders is available at the University of Minnesota. The Postdoctoral Associate will be responsible for conducting research in the technical development, validation, and clinical translation of quantitative MRI techniques at high (3T) and ultrahigh (≥7T) field strengths to advance basic understanding and clinical management of ischemic and degenerative disorders of the hip, knee, and/or spine that are precursors to osteoarthritis and back pain. MRI techniques of interest include relaxation time mapping (T2, T1ρ, T2ρ, and RAFF), diffusion imaging, perfusion imaging, ultrashort-echo time (UTE) imaging, and strategies for efficient, high-resolution imaging. The work will include imaging of large animal models and human subjects to assess injury and repair to bone and cartilage.

Resources and Environment

The Postdoctoral Associate will join an interdisciplinary team of scientists and clinicians in veterinary medicine, radiology, orthopedic surgery, rehabilitation medicine, and engineering. This individual will have access to state-of-the-art imaging equipment, including the vast resources of the Center for Magnetic Resonance Research (which include 3T, 7T, and 10.5T whole-body MRI scanners and 9.4T and 16.4T preclinical MRI scanners) and a state-of-the-art 3T MRI scanner in the College of Veterinary Medicine. The Postdoctoral Associate will be immersed in a rich research environment with opportunities for career development, including participation in seminar series and presentation of research at international conferences and workshops.

Required Qualifications

- PhD in engineering, physics, computer science, or a related field
- MRI data collection and analysis experience
- Programming experience in Matlab, C/C++, and/or related languages
- Strong oral and written communication skills as evidenced in part by peer-reviewed publications

Preferred Qualifications

- MRI pulse sequence programming experience

Application Instructions

Please apply, providing a cover letter and CV, at: https://hr.myu.umn.edu/jobs/ext/337918

Please direct any questions regarding the position to:

Casey P. Johnson, PhD
Assistant Professor, Department of Veterinary Clinical Sciences
Affiliate, Center for Magnetic Resonance Research
University of Minnesota
Tel: 612-624-2743
Email: john5037@umn.edu