We are seeking enthusiastic individuals to contribute to research projects focused on **Advanced Spinal Cord MRI** in the laboratory of **Matthew Budde** in the Medical College of Wisconsin in Milwaukee. The lab emphasizes a broad integration of MRI research from acquisition, analysis, and applications with a specific focus on the spinal cord.

The lab is primarily conducting studies in patients and animal models of spinal cord injury and disease:

- Patient studies of acute and chronic spinal cord injury funded by the Department of Veterans Affairs and the Craig H Neilsen Foundation offer the ability to integrate novel MRI technological advances with clinical medicine and unmet clinical needs.

- Studies in animal models of spinal cord injury funded by the NIH offer the ability to develop MRI technologies in a preclinical setting with an emphasis on both basic science and human translation.

The primary focus of both studies is advanced MRI contrasts including diffusion and perfusion weighted MRI.

The lab utilizes a highly collaborative approach across departments and centers to integrate basic science, MRI technology, and clinical research. The lab is housed within the Department of Neurosurgery and the newly-formed Center for Neurotrauma Research at MCW. We utilize the imaging resources and extensively collaborate with the Center for Imaging Research in the Department of Radiology.

The ideal candidate will be highly motivated and have experience in MRI technical development or spinal cord imaging. While experience in pulse sequence programming is preferred, a strong desire to learn in the right individual will be considered. The candidate will operate as part of the collaborative and integrated team and will have opportunities to develop their own related interests and research portfolio.

**Minimum experience and skills include:** A PhD or equivalent in MR physics or imaging science, experience with image processing tools (FSL, ANTs, Spinal Cord Toolbox), and programming languages (Python, Matlab, Unix).

**Desirable experience and skills include:** MRI pulse sequence programming (GE: EPIC; Bruker: Paravision), experience with spinal cord MRI in humans or animals, and preclinical spinal cord injury research.

**Available Facilities:** MR scanners available for human research studies and technology development include a 3T GE Discovery MR750, a 3T GE Signa Premier, and a 7T GE Discovery MR950. Additional MR systems within Froedtert Hospital (a Level 1 trauma center) are used for acute clinical inpatient studies. Animal MRI capabilities include a 9.4T Bruker Biospec and an animal-insert for the 7T to conduct preclinical studies in the GE MRI environment.

Interested candidates should forward a CV, statement of research experience and interests, and contact information for three references, to:

**Matthew Budde, PhD – mdbusde@mcw.edu**  
Associate Professor, Department of Neurosurgery  
Medical College of Wisconsin  
Milwaukee, WI 53295

Additional information:
Center for Imaging Research: [http://www1.mcw.edu/CIR.htm](http://www1.mcw.edu/CIR.htm)  
Department of Neurosurgery: [http://neurosurgery.mcw.edu/](http://neurosurgery.mcw.edu/)  
Medical College of Wisconsin: [https://www.mcw.edu/departments/human-resources/living-working-milwaukee](https://www.mcw.edu/departments/human-resources/living-working-milwaukee)

The Medical College of Wisconsin is an equal opportunity employer.