Multiple Positions in Advanced Musculoskeletal MR Imaging and Image Analysis

Program of Advanced Musculoskeletal Imaging
Cleveland Clinic, Cleveland, Ohio

Advanced musculoskeletal imaging is an open and emerging field with huge patient population and high clinical impact. The Program of Advanced Musculoskeletal Imaging (PAMI) at Cleveland Clinic has been built upon outstanding resources for imaging research, and nationally top-ranked clinical care and research in orthopaedics and rheumatology. The program has a highly multidisciplinary and diverse team, with collaborative projects across institutes within Cleveland Clinic, with Case Western Reserve University, and with investigators around the world. The mission of PAMI is to advance musculoskeletal imaging, in particular advanced quantitative imaging, in healthcare for orthopaedics and rheumatology through novel technology development, rapid clinic translational and education.

PAMI is looking for highly-motivated candidates for positions including post-doctoral research fellows or research associates, and software engineers. The research projects include development of novel pulse sequences of in vivo MSK MR imaging and spectroscopy, image processing and analysis, and their clinical applications to MSK diseases. In particular, the sequence development will include developing advanced acquisition/reconstruction methods in combination with novel machine learning approaches for quantitative MSK MRI and accelerated MSK MRI and MR spectroscopic imaging, ultra-high field (7T) MSK proton and multi-nuclear imaging and spectroscopy. The image processing projects will develop advanced MSK imaging processing tools using classical techniques and cutting edge deep learning techniques. Successful candidates will join a multidisciplinary and dynamic team with rich resources and strong support for a successful career development, and will have access to research dedicated MR systems (Siemens whole body 3T and 7T), and other MR, PET-MR systems across different campus at CCF, high performance computing resources and GPUs, as well as large outcome databases for patients in orthopaedics and rheumatology.

Requirements:
**Postdoctoral fellows and research associates:** A PhD degree in physics, biomedical engineering, electrical engineering, computer science, biochemistry or related field. Strong research experience in MR. Strong programming skills. Strong communication skills in written and verbal English. Experience in MR pulse sequence programming or advanced image processing algorithm development is a plus.

**Software engineers:** A BS or MS degree in computer science, electrical engineering, biomedical engineering, or related field. Strong programming skills with C, C++, Matlab, or Python. Strong communication skills in written and verbal English. Experience in image processing is a plus.

Applicants should email a CV, along with a brief letter outlining their research background and interests and a list of 2-3 references to Dr. Xiaojuan Li: lix6@ccf.org

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