Multiple Positions in Advanced Musculoskeletal MR Imaging and Image Processing

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Department of Radiology, Imaging Institute
Cleveland Clinic, Cleveland, Ohio

The Lerner Research Institute, the Imaging Institute, and the Institute of Orthopaedics and Rheumatology at the Cleveland Clinic are forming an exciting new Program in Advanced Musculoskeletal Imaging (PAMI). PAMI will build upon nationally top-ranked clinical care and research in orthopaedics and rheumatology and outstanding resources for imaging research already available at Cleveland Clinic, and new collaborations across institutes within Cleveland Clinic 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, translational research and education.

PAMI is looking for highly-motivated candidates for 2-3 positions including post-doctoral research fellow, research associate or staff scientist positions in the field of musculoskeletal MR imaging and image processing. 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 musculoskeletal 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, as well as large outcome databases for patients in orthopaedics and rheumatology. In particular, CCF has an extremely supportive environment for researchers to translate advanced techniques into clinical practice for immediate and high clinical impact, and for entrepreneurial activities to convert new discoveries into valuable intellectual property suitable for commercialization.

Requirements: A PhD degree in physics, biomedical engineering, electrical engineering, computer science, biochemistry or related field; strong communication skills in written and verbal English; strong programming skills with C, C++, or Matlab. Experience in MR pulse sequence programming or advanced image processing algorithm development 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 Onsite interviews can be scheduled at the coming ISMRM conference.

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