Faculty, Project Scientist, Postdoc and PhD graduate student Positions – Advanced Imaging Techniques and Applications

Cedars-Sinai Medical Center, affiliated with the UCLA, is a world-leading hospital and is currently ranked #2 nationally on the Best Hospitals Honor Roll (Introduction to Cedars-Sinai). BIRI is one of the leading MRI research groups with a central focus on developing and applying novel imaging technologies to today’s most pressing translational research and clinical questions. BIRI has been constantly growing into a team of 70 onsite personnel including research and clinician-scientists, technical and support staff, postdoctoral scientists, and doctoral students. BIRI has two full-time on-site MRI scientists from Siemens.

BIRI Research Core Facility houses a state-of-the-art 3T whole-body scanner (Siemens MAGNETOM Vida), a whole-body PET/MR system (Siemens Biograph mMR), and Bruker BioSpin 9.4T small animal scanner, all dedicated to research. A 7T MRI human scanner is expected to be installed. Our research and clinician scientists collaborate closely with physicians to synergistically bring together technical and clinical expertise in areas such as cardiology, neurology, and oncology imaging.

The candidates will join an interdisciplinary research program led by Dr. Hui Han and work in an exciting new growing field in MRI. You will focus on data acquisition and processing and publications about new findings related to various imaging applications throughout the human body. Our completed novel MR hardware imaging platform enables data acquisition in new ways previously impossible. The candidate will work synergistically with the MR Hardware team led by Dr. Hui Han who is the Director of MR Engineering. (MR Engineering | Cedars-Sinai). Dr. Han is known as the developer of “iPRES” MR coils, an impactful technology for combining B0 shimming and RF detection into a single array. The MRI Laboratory comprises a newly constructed lab space (2,000 sq. ft.) in the iconic Pacific Design Center in West Hollywood and a secondary lab space (150 sq. ft.) in Imaging Core Facility.

Desirable background and skills may include experience in data acquisition on human MRI scanners, image acquisition and processing, MRI physics, pulse sequence development, or image reconstruction. Hands-on experiences with the acquisition, processing, and analysis of MRI data are essential.
The candidate should have a **strong motivation to publish** with a proven track record. **Experiences in hardware development are not required.** Pulse sequence development and/or MRI reconstruction is a plus. You will work on improving image quality and accuracy throughout the human body using **advanced MRI techniques** such as diffusion, spectroscopic, susceptibility, and functional imaging. You will also work on applications of these techniques to various clinical applications in neurology, oncology, and cardiology. These advanced techniques provide information beyond macroscopic morphology on tissue microstructure, metabolism, and function, offering unique information associated with various pathological states. The candidate will benefit from a world leading research group full of MR physicists and experts in pulse sequence development, image reconstruction, motion correction, and artificial intelligence.

The projects are well funded by NIH under a collaboration effort with world-renowned scientists such as Drs. Andrew Maudsley, Hyunsuk Shim, and Debiao Li. Ongoing projects are highly supported and anticipated by major MRI vendors as it advances the field by solving major limitations of high-field MRI scanners. Dr. Han currently serves as the Vice Chair of the ISMRM MR Engineering Study Group and will rotate to the chair next year. He is also the Vice President of the Overseas Chinese Society for Magnetic Resonance in Medicine (OCSMRM) and will rotate to the President next year. The OCSMRM is the largest society for researchers of Chinese origin in the field of magnetic resonance in medicine around the globe.

Positions available range from **postdoc, project scientist, to junior faculty positions.** Depending on candidate’s qualifications, a generous compensation package will be provided. The research area holds multiple new research opportunities. Ambitious young scientists are especially encouraged to apply as the positions can lead to independent faculty position with institutional support.

Interested applicants, please contact Dr. Han with including a resume and a brief description of interest:

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