Academic Posting Template

Please use the following template for online postings.

Posting Title

Postdoctoral research fellow/associate on development of motion-tolerant Pediatric MRI with reduced Anesthesia

Department of Medical Physics
Memorial Sloan Kettering Cancer Center

MSK Overview

Memorial Sloan Kettering Cancer Center (MSK) is one of the world's premier cancer centers, committed to exceptional patient care, leading-edge research, and superb educational programs. The blending of research with patient care is at the heart of everything we do. The institution is a comprehensive cancer center whose purposes are the treatment and control of cancer, the advancement of biomedical knowledge through laboratory and clinical research, and the training of scientists, physicians, and other health care workers.

The Ricardo Otazo Lab mskcc.org/otazo at Memorial Sloan Kettering Cancer Center (MSK) offers a postdoctoral research fellow or research associate (according to previous experience) position to develop motion-tolerant pediatric MRI with reduced anesthesia using non-Cartesian acquisition and deep learning auto-navigation and reconstruction.

The work involves innovations in image acquisition and reconstruction, and application to clinical cases. Our group is a world-leader in the development of fast motion-tolerant MRI techniques, including GRASP, Movienet and MRSIGMA. The selected candidate will have the opportunity to develop the next generation of motion-tolerant techniques for pediatric imaging and to work within a multidisciplinary group including physicists, engineers, computer scientists and clinicians in the departments of Medical Physics and Radiology at a world class institution in cancer care and research.

The selected candidate will have the opportunity to work in a highly collaborative, multidisciplinary environment alongside clinical imaging and radiotherapy physicists, engineers, computer scientists, and clinicians within the Departments of Medical Physics and Radiation Oncology at one of the world's leading institutions in clinical cancer care and research. This collaborative environment offers unique opportunities to contribute to translational research, engage in innovative, cutting-edge projects, and collaborate with a multidisciplinary community dedicated to advancing MRI-guided radiotherapy and improving patient care and outcomes. The candidate will benefit from advanced imaging and computing resources, as well as opportunities to advance professionally and share research outcomes through conferences and publications.

Lab or Department & Position

The Department of Medical Physics consists of over eighty faculty physicists and computer scientists plus support staff working on various physical problems related to diagnosis and therapy for cancer, in partnership with radiologists, radiation oncologists, and other medical professionals. Medical Physicists in the diagnostic imaging physics track are actively engaged in several research programs that include

molecular, MR and CT imaging as well as the new radionuclide therapies called theranostics. Examples include advanced MR acquisition techniques, motion correction, MR fingerprinting, artificial intelligence, and deep learning for image reconstruction in all imaging modalities. MSK is a World leader in imaging and theranostic research and supports one of the largest pre-clinical small animal core facilities in the United States that includes MR, PET, SPECT, CT, ultrasound imaging equipment that provides a conduit for the translation of experimental techniques into clinical trials. Additional highlights include grant-funded research in quantitative MRI, hypoxia imaging, imaging drug delivery, and radionuclide dosimetry. Research and development in radiotherapy physics include the use of artificial intelligence for improved imaging and target localization, real-time tumor tracking, tissue segmentation, treatment planning, and adaptive radiotherapy.
Diagnostic, Nuclear and MRI Medical Physicists play a key role in supporting all imaging devices throughout the MSK enterprise, maintaining and harmonizing acquisition protocols, troubleshooting image artifacts, and maintaining equipment accreditation and regulatory compliance. We support well over 500 imaging instruments that include 40 CT scanners, 21 MR scanners, and 17 PET scanners and work with radiologists in the selection of new imaging equipment and the implementation of new imaging techniques. Since diagnostic images are at the core of cancer diagnosis and response assessment, we have a strong philosophy to ensure that all imaging equipment throughout the network is operating at the optimum performance, per the overall mission of MSKCC to advance the state of cancer care.

The MRI Physics group has research time at clinical MRI scanners in the Department of Radiology, including state-of-the art 1.5T and 3T GE scanners. The MRI Physics group also has 5 high-performance computer servers with multiple GPUs for image reconstruction and deep learning.

Salary will be commensurate with experience and the cost of living in New York City. Subsidized housing close to the MSK campus may be available.

Candidate Requirements

The ideal candidate should have:

- PhD in Physics, Engineering or Computer Science, or related field.
- Background on MRI Physics
- Expertise in image reconstruction coding, or deep learning is a plus.
- A strong track record of peer-reviewed publications
- Highly motivated with the ability to work both independently and collaboratively
- We also invite computer scientists interested in applying deep learning to MRI.
- Excellent verbal and written communication skills are required

Required: Application Submission

If you have any questions about this job opportunity, please contact:

Ricardo Otazo, PhD
otazotoj@mskcc.org

Required:
Salary Range

Salary: $72,000 - $ 94,000

Physician compensation is based on multiple variables. This range represents annual salary only and does not include supplemental performance-based pay or any one-time payments that eligible candidates may be offered at the time of hire.

Required: Equal Opportunity Statement

MSK is an equal opportunity and affirmative action employer committed to diversity and inclusion in all aspects of recruiting and employment. All qualified individuals are encouraged to apply and will receive consideration without regard to race, color, gender, gender identity or expression, sexual orientation, national origin, age, religion, creed, disability, veteran status, or any other factor which cannot lawfully be used as a basis for an employment decision.

Federal law requires employers to provide reasonable accommodation to qualified individuals with disabilities. Please tell us if you require a reasonable accommodation to apply for a job or to perform your job. Examples of reasonable accommodation include making a change to the application process or work procedures, providing documents in an alternate format, using a sign language interpreter, or using specialized equipment.