Hybrid research and imaging physics residency position at MSK, New York City

Memorial Sloan Kettering Cancer Center

We have an opening for hybrid research and imaging physics residency position in the Department of Medical Physics, with a flexible start date for the right candidate. This is a hybrid residency program in which a two-year grant-funded research project is followed by a two-year clinical residency in medical imaging physics. For those who enter the 4-year program without CAMPEP credentials, you will be enrolled in a CAMPEP Certificate program with full tuition support from the department. You will be required to complete the Certificate program during the first two years of the program before entering clinical training. Research for this position will be conducted under Dr. Hao Zhang, PhD, DABR on a project titled *"Deep learning enabled fast gated CBCT imaging for lung SBRT".* You will be responsible for algorithm development, experimental validations, and preparation of manuscripts for publication. You will also have the opportunity to participate in the first-in-human clinical trial and translation of this imaging technique to the clinic. The ideal candidate will have: (1) PhD in medical physics, physics, engineering, or a similar scientific discipline; (2) expertise on medical imaging and deep learning; (3) programing skills with Python and Matlab; (4) a track record of peer-reviewed publications. Salary is commensurate with skills and experience in accordance with MSK policy.

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 an NCI-designated 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 healthcare care workers. MSK has been recognized as the #2 Best Hospital for Cancer in the United States by U.S. News & World Report in 2022, marking the 33rd year in a row that MSK has ranked among the top two cancer hospitals in the country. MSK is located on the Upper East Side of Manhattan, New York City.

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.

Details of the residency program can be found at https://www.mskcc.org/hcp-education-training/residencies/medical-imaging-physics-residency. Specific information on employee benefits offered may be found at https://careers.mskcc.org/learn-about-msk/benefits/. The candidate and any eligible dependents will receive full medical, dental, and vision coverage. Visa sponsorship is available for international candidates.

Interested candidates should send a cover letter, curriculum vitae and list of three references via e-mail to:

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