Medical Imaging Scientist

Overview

St. Jude Children’s Research Hospital is one of the world's premier research and treatment centers for pediatric cancer and childhood disease. It has been recognized by Fortune magazine as one of the “100 Best Companies to Work For” every year since 2011 and was one of The Scientist's top 10 “Best Places to Work in Academia” for 7 consecutive years.

The Department of Radiation Oncology at St. Jude is seeking a creative and highly motivated Medical Imaging Scientist who shares our passion for advancing pediatric cancer treatments to join our research team. Your role will focus on maximizing the therapeutic ratio in proton therapy through novel analysis and modeling of imaging, radiation dose, and clinical outcome data as well as utilizing our state-of-the-art imaging technology. Your discoveries can directly impact pediatric cancer patients treated at St. Jude and worldwide.

As pioneers of bringing dedicated MR and spectral CT simulators to the Radiation Oncology Department, the main areas of our imaging research include predicting tumor and normal tissue response to both proton and adaptive proton therapy and improving proton therapy accuracy.

Responsibilities

- Combine knowledge of medical imaging, data science, and clinical needs to develop pipelines and algorithms for processing longitudinal multimodality imaging (MRI, PET, CT, CBCT), radiation dose distribution, and patient outcome data from clinical trials
- Develop novel applications of imaging technology for advancing tumor targeting, normal tissue avoidance and radiation treatment planning in children
- Participate in scientific activities with high clinical relevance (e.g. imaging optimization, data collection, data analysis and modeling, phantom measurements, experimental validation, quality assurance)
- Conduct scientific research and actively contribute to publications in peer-reviewed journals and grant applications
- Collaborate with an inter-disciplinary team (medical physicists, radiation oncologists, medical imaging scientists, IS system and software engineers, clinical research nurses and associates and radiation therapists) to improve clinical trial data collection, data storage and management, and data analysis
- Provide guidance and training to postdoctoral fellows, students, and clinical staff

Minimum Education

- Ph.D. in biomedical engineering, medical physics, computer sciences, electrical engineering, or other relevant engineering or related scientific field required

Minimum Experience

- Two (2) year's research experience in medical image analysis and processing beyond PhD is required

Preferred Experience and Skills
• Advanced knowledge of multimodality imaging and/or hands on experience in operating medical imaging equipment
• Excellent written and communication skills (evidence of prolific first-authored scientific publications in peer-reviewed journals)
• Knowledge of statistics and data science methodologies and techniques (e.g. hypothesis testing, classification, regression, time-series analysis, feature extraction, machine learning)
• Familiarity with computational tools (e.g. MATLAB, Linux, Python, R, C/C++, Java, ITK, SPM, FSL)
• Strong problem-solving skills and high level of self-motivation
• Ability to work both independently and collaboratively on assigned projects

Learn more and apply at: https://bit.ly/2tCd3Ad

EEO Statement

St. Jude is an Equal Opportunity Employer