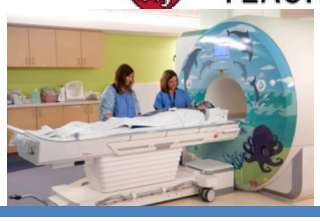
Boston Children's Hospital
Until every child is well™

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Postdoctoral Research Fellowship at Boston Children's Hospital & Harvard Medical School



The Quantitative Intelligent Imaging Lab (QUINlab) at Boston Children's Hospital and Harvard Medical School, led by Associate Professors Onur Afacan and Sila Kurugol, is inviting applications for an immediate Postdoctoral Research Fellow position. We are seeking highly motivated researchers eager to advance the frontiers of medical imaging and artificial intelligence with direct impact on pediatric health, diagnostics, and clinical care.

Research Focus Areas: The successful candidate will contribute to one of the following projects:

1. **Multimodal AI:** Developing methods that integrate large language models (LLMs) with advanced image analysis for chronic disease assessment.
2. **Next-generation MRI methods**: Developing machine learning tools for motion-compensated reconstruction, super-resolution, quantitative MRI, and automated analysis to extract imaging biomarkers from the brain and abdomen**.**

Why Join QUINlab? At QUINlab, you will:

- Develop innovative AI and imaging techniques with immediate clinical impact.
- Work with large patient datasets, cutting-edge computing resources (GPU clusters, cloud platforms), and advanced MRI facilities (dedicated 3T research scanner and clinical scanners).
- Collaborate closely with a multidisciplinary team of radiologists, clinicians, MR physicists, and computer scientists.
- Benefit from mentorship and career development, including opportunities to prepare grants, and explore both academic and industry career paths.
- Participate in a vibrant academic environment through seminars, and training at Boston Children's Hospital, Harvard Medical School, and Harvard Catalyst.

About QUINlab & Our Environment: QUINlab's mission is to transform diagnosis and treatment through intelligent imaging and analysis. We are based at Boston Children's Hospital, ranked #1 pediatric hospital in the U.S., and affiliated with Harvard Medical School, ranked #1 medical school nationally. Boston is a global hub for biomedical innovation, home to Harvard, MIT, Boston University, Northeastern, world-class hospitals, and a thriving biotech and pharma ecosystem. The opportunities for cross-training, collaboration, and networking are unparalleled. Beyond research, Boston consistently ranks among the top U.S. cities for quality of life, health, and happiness.

Minimum Requirements

- PhD in biomedical engineering, computer science, electrical engineering, medical physics, or a related field.
- Strong background in machine learning and/or medical imaging.
- Proficiency in programming, e.g. Python and deep learning (PyTorch, TensorFlow).
- Demonstrated research productivity with a strong publication record Excellent analytical, problem-solving, and scientific communication skills.
- Excellent problem-solving, communication, and teamwork skills

Preferred Qualifications

- Experience with deep learning for image analysis or MRI.
- Expertise in MRI reconstruction, super-resolution, or quantitative imaging.
- Familiarity with multimodal AI, generative AI, or transformer-based models.

How to apply: Please send your CV along with a copy of a technical paper, the desired start date, a paragraph including statement of career goals and three references to Dr. Onur Afacan (onur.afacan@childrens.harvard.edu) and Dr. Sila Kurugol (sila.kurugol@childrens.harvard.edu).