



Ultrasound Engineers, Instructor or Assistant Professor

Company: Center for Ultrasound Research and Translation, Massachusetts General Hospital
Website: curt.mgh.harvard.edu | Position: Instructor or Assistant Professor (junior faculty)

Contact: CURT@mgh.harvard.edu

Location: Boston, MA

Job Description:

We seek two highly talented and motivated Ultrasound engineers to join our collegial and diverse multidisciplinary team. Our goal is to transform medical ultrasound diagnosis through work that spans hardware and algorithm development, with a tightly integrated clinical translational component and excellent access to physicians and patients. This is a unique opportunity to be part of an energetic multidisciplinary group working to translate impactful research.

The successful candidates will be appointed as Instructor or Assistant Professor of Radiology at Harvard Medical School and as Research Staff at Massachusetts General Hospital. They will be expected to proactively develop research interests and to work effectively with others. In this junior faculty role, candidates seeking creative academic careers will have excellent growth opportunities, access to committed mentors, assistance defining an early career trajectory, and mentored opportunities to apply for career development and research grants. There will be opportunities for co-supervision and mentorship from MIT and Harvard scientists working in collaboration with CURT physicians and scientists. Our laboratory has expertise in advanced signal processing and machine learning, and there will be opportunities to gain exposure to these techniques.

The successful applicant will:

- Work collaboratively with a highly motivated and collegial team of physicians, clinical researchers, computer scientists, and engineers to solve important medical problems in a world-class research facility.
- Mentor HMS fellows and residents in research projects.
- Have access to a vast amount of high-quality medical imaging and pathologic data, advanced computing facilities, a friendly environment, and an unparalleled community of basic and clinical scientists.
- Gain a deep understanding of key problems in medical imaging, and knowledge and understanding of important disease processes, including cancer, fibrosis, and inflammation.
- Be expected to (i) work collaboratively on group projects and (ii) develop a trajectory to research independence by developing new lines of scientific inquiry and writing related grant applications.

Requirements:

- The ideal candidate will have a PhD in Electrical Engineering, Biomedical Engineering, Medical Physics, Acoustics, Applied Physics, Applied Mathematics, Computational Statistics, Computer Science, or a related discipline and will have completed a period of post-doctoral research fellow training.
- **Required:** Strong communication skills in written and verbal English. Strong knowledge of ultrasound wave propagation and scattering physics, signal processing, and experience with medical ultrasound instrumentation. Proficiency in one or more programming language, especially MATLAB, C++, , Python, or R.
- **Preferred:** Experience with Linux, machine learning, and image analysis. Software beamformation experience and experience with the Verasonics platform. Excellent understanding of beam formation processes with emphasis on phase aberration correction, local speed of sound estimation, novel transmit receive patterns, and estimation of coherent aperture size. A demonstrated record of high-quality publication in ultrasound related journals.
- Qualified candidates should be self-motivated and possess the ability to work both independently and collaboratively.

Applicants should send a cover letter describing research experience, interests and goals, a CV with a full list of publications, a link to a GitHub profile (if available), and three references (including one from a current supervisor) to Anthony E. Samir, MD, MPH. Interviews will be conducted by a multi-disciplinary team of clinicians and ultrasound scientists. Salary will be commensurate with experience.

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy, and pregnancy-related conditions, or any other characteristic protected by law.

Contact: Anthony E. Samir, MD, MPH, (CURT@mgh.harvard.edu, asamir@mgh.harvard.edu).