

Faculty Name:

Dr. Elisa Konofagou

Faculty Email:

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Lab:

UEIL

Project Title:

Ultrasound Elastography for Cardiac Diagnostics

Description:

Have you ever wondered how doctors look at our hearts? Ultrasound is an important point-of-care imaging modality for cardiac diagnostics. In addition to existing clinical uses for qualitative assessments, this project focuses on creating reliable objective assessments of cardiac function through tracking the movement of the heart muscle throughout the cardiac cycle. This project uses raw ultrasound signal to calculate strain and electrical activation to diagnose high-risk problems such as ischemia, infarction, and arrhythmia. This project has the potential to impact the speed and accuracy of diagnostics and increase health awareness. We have clinical projects in the Emergency Department and Cardiology, where we gather patient data for validation of our methods' accuracy and precision. Interns will be able to help with equipment testing and optimization, code development, automation, and clinical data collection and interpretation. This project is great for a wide range of students, especially Mechanical, Electrical, Computer, and Biomedical Engineering students interested in healthcare and health-related research.

Location of Research:

On Site

of hrs/week:

40

Department/Program:

Biomedical Engineering

Eligibility:

BS, First Year, BS, Second Year, BS, Third Year, BS, Fourth Year, MS

To apply, please contact:

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