BIOMEDICAL ENGINEERING
COLLEGE OF ENGINEERING AND APPLIED SCIENCE

RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

APPLICATION DEADLINE: April 29, 2024

PROJECT TITLE: Ultrasound image guidance of minimally invasive therapy

Physical Requirement : No special requirements
Project's Technical Skills Requirement : Desirable skills include programming in MATLAB (C, Python experience also potentially helpful) and experiments with bioinstrumentation or general test and measurement equipment.
Project's Available Positions : Research co-op fellowship (1)

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Project Description

Research co-op fellowship in a Biomedical Engineering lab located in the UC Bioscience Center on UC's medical (East) campus. Our research is on novel ultrasound methods for image-guided therapy. Current projects include ultrasound characterization of vocal-tract motion for biofeedback in speech therapy and swallowing disorders, biomechanical measurements for assessment of musculoskeletal pain and dysfunction, and echo decorrelation imaging for real-time guidance and control of thermal ablation. Fellows will perform experiments, data analysis, and programming in collaboration with teams including faculty, postdoctoral fellows, and graduate and undergraduate students. Learning opportunities include ultrasound signal and image processing, cross-disciplinary collaboration skills (e.g. collaboration of engineers with clinicians specializing in otolaryngology and speech-language pathology), and clinical research involving human subjects.