

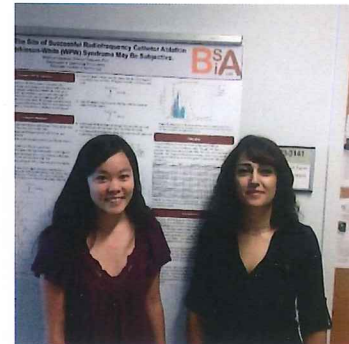
## Summer 2015 Internship

Michel Liu  
 Biomedical Engineering  
 Dr. Behnaz Ghoraani  
 Rochester Institute of Technology  
 Biomedical Signal and Image Analysis Lab



### Organization Description

Dr. Ghoraani and her interns work in the Biomedical Signal and Image Analysis Lab at RIT. Their mission is to understand human physiology from an engineering perspective. Their research of interest includes developing signal and image analysis techniques for medical instrumentation, cardiovascular engineering and instrumentation, and audio and speech processing.



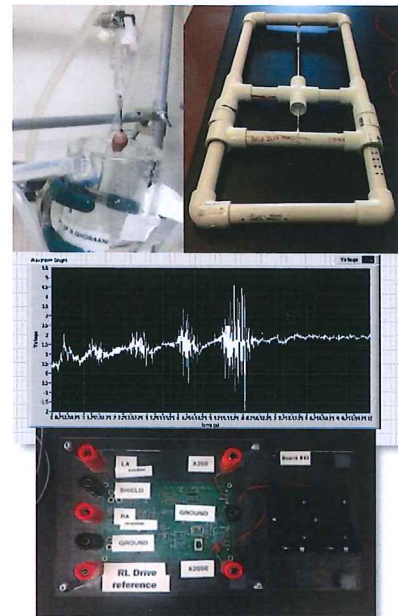
The aim of this internship was to familiarize myself with engineering and understand a biomedical engineering research environment by gaining hands-on experience and knowledge.

### Objectives

- Learn about physiology and technology
- Participate in research lab work
- Interact with biomedical engineers
- Conduct my own independent experiment
- Collect and analyze data
- Utilize and familiarize myself with technology

### Activities

- Measured muscular activity with an electromyogram
- Refined hand dynamometer
- Worked with amplifier and surface electrodes
- Designed experiment for a high school outreach program
- Conducted experiments with an EMG and analyzed its data
- Utilized programs and software including Excel and LabVIEW
- Set up a Langendorff system
- Collected data from a rat's heart
- Gained exposure to MATLAB
- Wrote a detailed report that contained background, method, and conclusions.



I wanted an internship in order to refine my career choices before beginning the important college admissions process. During this internship, I often found myself using principles from biology, physics and math classes. This valuable experience truly illuminated the engineering field for me and deepened my interest in biology.