F22.001: Towards the Mitigation of Extrinsic Particulate in Intravascular Devices

Faculty mentor: Zhongwang Dou

Overview

Extraneous matter such as particulate in the human cardiovascular system significantly increases the risk of developing cardiovascular illnesses. This project focuses on evaluating and classifying extrinsic particles caused by medical devices using an in-house developed 3D micro-flow imaging system. We will also design and implement a novel engineering system to mitigate particulates.

What the student will DO and LEARN

This internship will provide the student with hands-on research opportunities on biomedical devices and engineering designs. The intern is expected to design protocols using SolidWorks software, implement mechanical concepts using IDEA Lab and Machine shop resources, and conduct experiments together with senior/graduate students.

Additional benefits

This internship may lead to Undergraduate Independent Research Class credit. It may also grow as a capstone project or even your graduate study thesis project.

Additional qualifications

Students who have a background in Engineering Design, SolidWorks, Machine shop, Imaging processing are a strong plus.

Time commitment

6 hrs/week for 30 weeks