Flow of biological fluids through microchannels plays a remarkable role in regulating human health, from understanding pathophysiology to fighting COVID-19 and from diagnostics to therapeutics. However, body fluids display complex mechanics due to the presence of cells, macromolecular drugs etc., posing grand challenges to developing precise medical technologies. In this talk, I will talk about my past research experience and discuss our group's ongoing work on harnessing engineering principles of fluid mechanics, material deformations and mass transfer to advance healthcare research in a mechanistic and quantitative manner. I will highlight a computational project on predicting ideal physicochemical properties of nanomedicine based on the biophysics of nanoparticle-membrane interactions and an experimental project on developing new in vitro models to analyze immunopathology in glaucoma disease progression.

TEN TALKS

An Undergraduate Seminar Series

MICROFLUID FLOW FOR HEALTH: FROM BLEEDING TO DRUG DELIVERY

QIN MAGGIE QI

SEPTEMBER 19, 2023

12-1pm, 66-360

LUNCH WILL BE SERVED SO PLEASE RSVP BY 9/13

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