

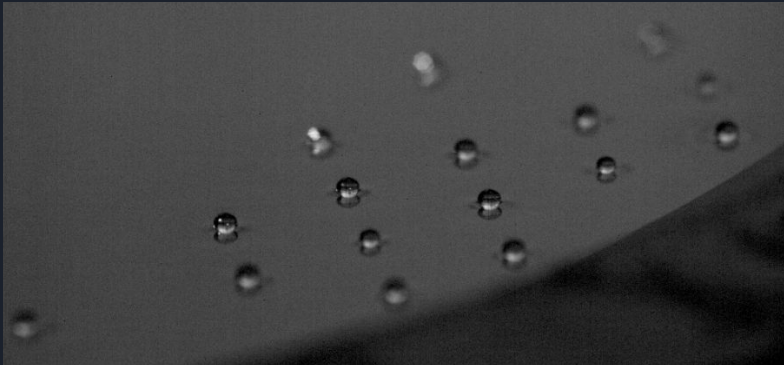


Improving a Shaker System for Bouncing Droplet Experiments

SCRP 2021
Teddy Brewer

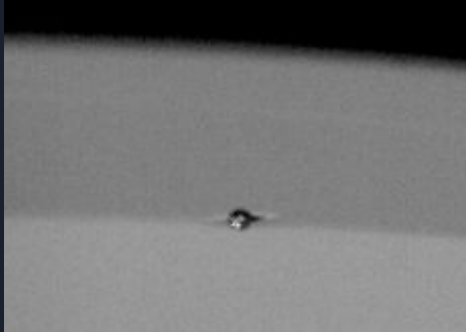
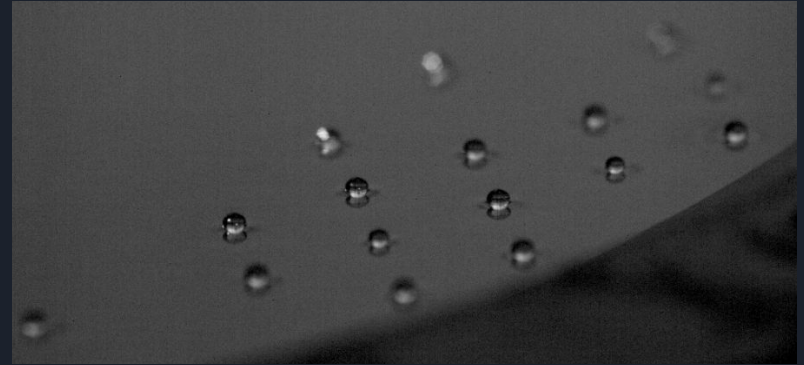
Bouncing Droplets Overview

- Bouncing droplet
- Walking droplet
- Liquid crystals



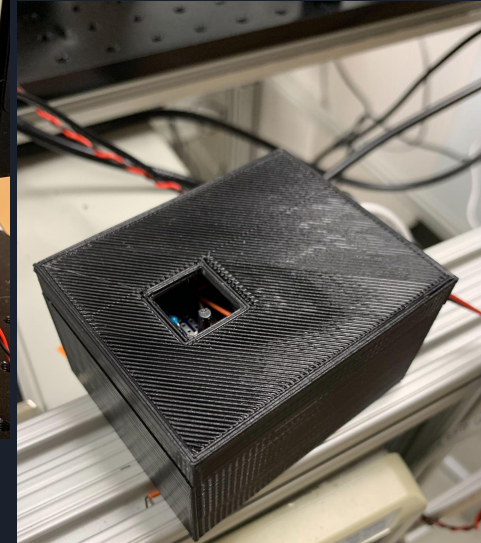
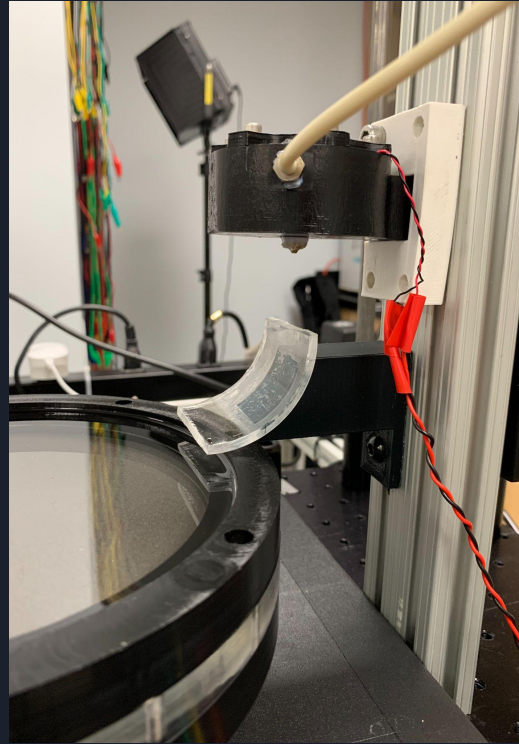
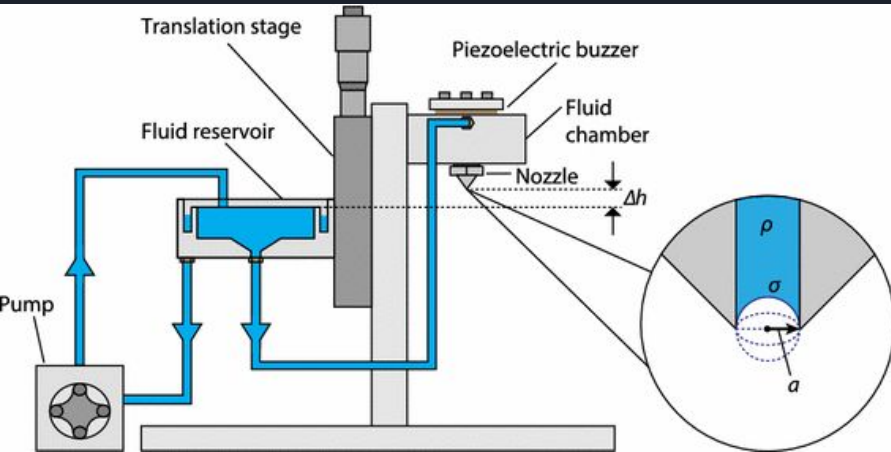
Research Importance

- Self organizing Systems
- Droplet entry (splashing)



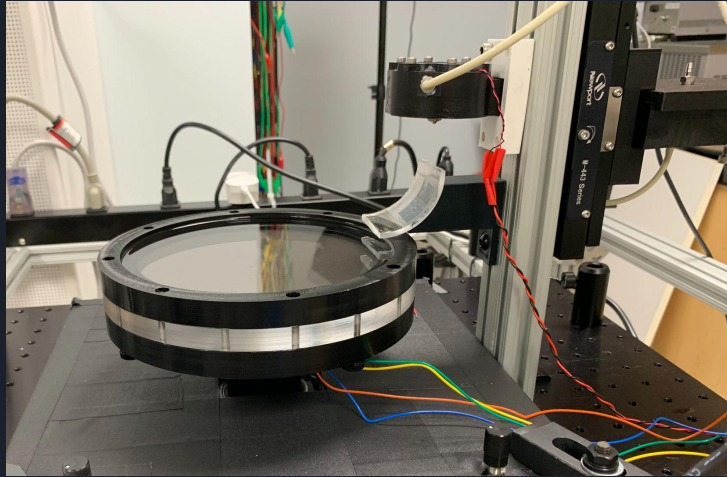
Project 1: Droplet Generator

- Problem: leak

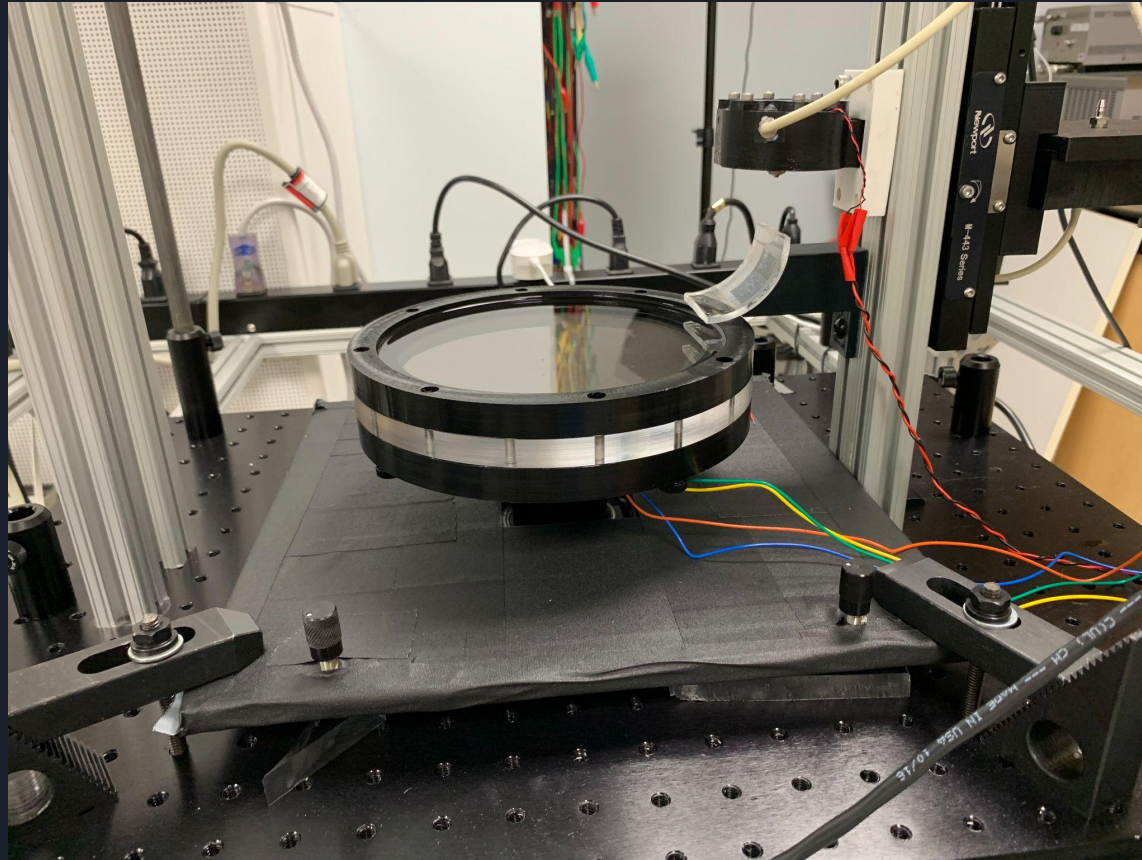


Project 2: Accelerometer

- Used to measure amplitude

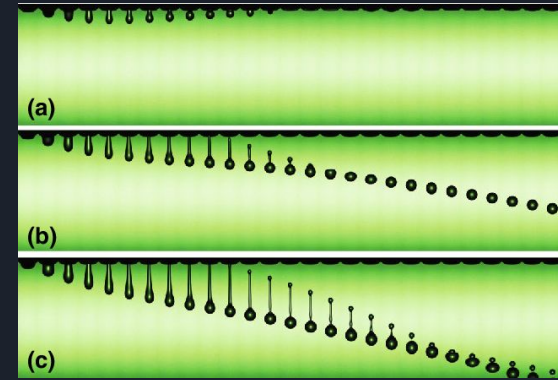


Project 3: Leveling System



Project 4: Various Tests

- Droplet Diameter (different nozzle sizes)
- Ramp



Harris, Daniel M., Tanya Liu, and John W. M. Bush. "A Low-Cost, Precise Piezoelectric Droplet-on-Demand Generator." *Experiments in Fluids* 56.4 (2015): n. pag.





Future projects

- Fix double drop problem
- More exploration about ramp
- Creating crystals

