

# BITNG LAB UPDATE

Carl Demolder
Date 6/17/2021

# **Progress from last week**

- Shriner's project
  - Strain sensor manufacturing
  - PCB redesign
    - Submitted through workday
    - Waiting for confirmation from PCBMinions
- LP ECG
  - PCB redesign
    - Submitted through workday
    - Waiting for confirmation from PCBMinions
- Personal schedule



# SHRINER'S PROJECT



### Strain sensor

#### Observation:

 Rounded pattern has a higher probability of removing AgNW from PDMS

### Proposed solution:

 Laser cut pattern after drop casting

#### Results:

- More consistent results
- Able to produce a clean line around perimeter of pattern



Rounded serpentine pattern



# **Strain sensor: Next Steps**

### Straight line design:

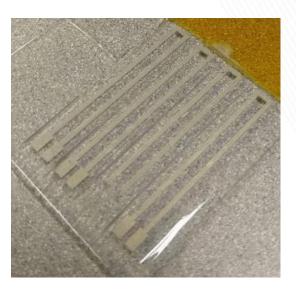
- Test max strain before electrical disconnection
- Calculate change in resistance over strain

#### Serpentine line design:

- Explore TEOS surface treatment of PDMS
- Drop cast more samples and improve adhesion between AgNW and PDMS

### Silkscreen pattern design:

Order pattern design from supplier





## **PERSONAL SCHEDULE**



### **Personal Schedule**

- Departure flight: Thursday 7/8 @ 5:15 PM
- Personal day: Friday 7/9
- Arrival flight: Monday 7/12 @ 3:20 PM
  - Will still be able to attend Monday morning meeting



## **PATH FORWARD**



# Path forward (6/14/21 - 6/21/21)

- Shriner's Project:
  - Sensor fabrication:
    - Strain sensor
      - Laser cutter booked: 6/15 & 6/18
  - Sensor characterization:
    - Strain sensor
    - Temperature sensor



## **APPENDIX**

