



# 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