# EE / CprE / SE 491 – sdmay20-10
# Power Scraping Module
## Week 5 Report
*10/28/2019 -11/08/2019*
*Client: Honeywell FM&T*
*Faculty Advisor: Gary Tuttle*

## Team Members/Role:

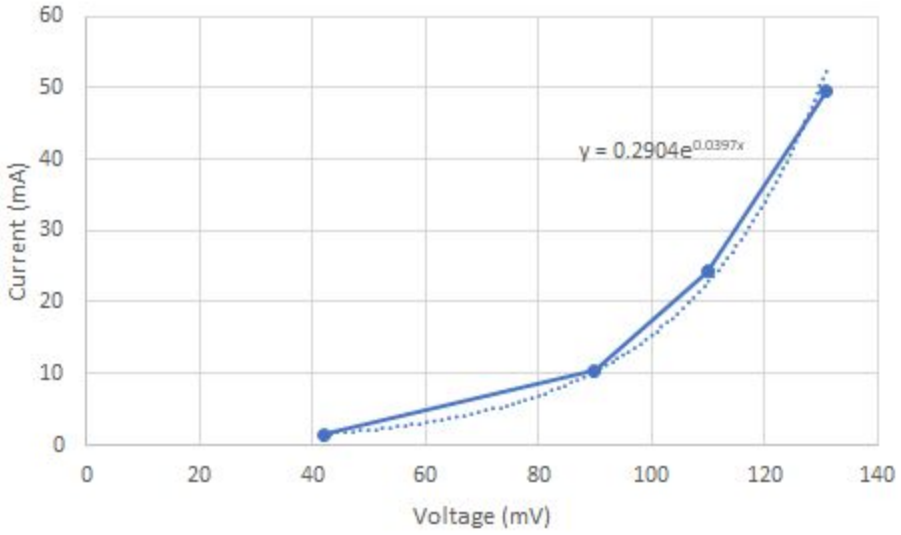
Jordan Fox — Chief Engineer
Xiangyu Cao — Design Engineer
Andesen Ande — Design Engineer
Ahmed Salem — Test Engineer
Ben Yoko — Test Engineer
Shahzaib Shahid — *Team Leader*

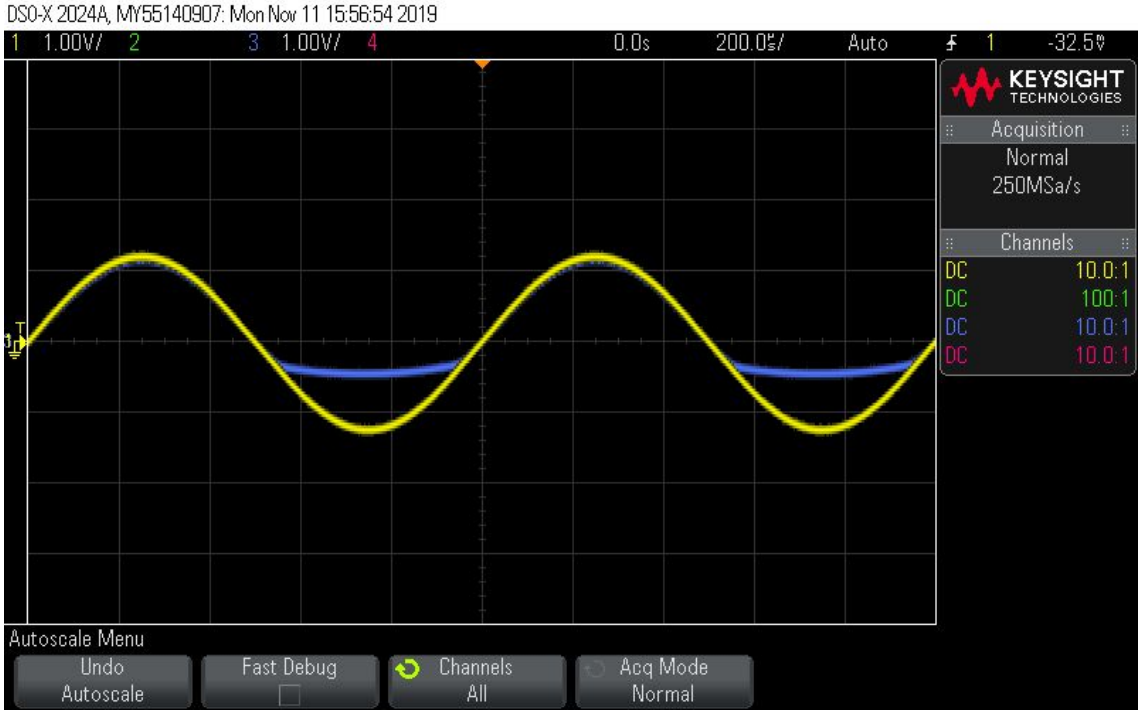
## Weekly Summary

This week we tested our circuit parts individually and discussed results with our faculty advisor and client. We did not complete testing, but the results we did get were informative. We tested our diode and the forward voltage drop which performed as stated. Although we will examine our part selection to see if there are better alternatives. We are currently trying to run to successfully test on our booster. If we continue to have troubles we will consider either purchasing a different booster or making our own.

# Past Week Accomplishments

Below are the results of our schottky diode tests. The first graph is a I-V characteristic plot of a schottky diode in series with a varying resistance being supplied  a constant 5V DC. The second picture is an oscilloscope trace of the schottky diode in series with a resistor given a 2.5 Vpp at 1kHz.. From the second figure we observed that the negative cycle of the input sinusoid is not completed filtered. Our challenge was understanding the significance of this non-ideal behavior. We are deciding whether or not we need better part selection or modifications to our design that account for that behavior.



## Individual Contributions

| **Name** | **Hours this week** | **Hours Cumulative** |
|---|---|---|
| Jordan Fox | 6 | 31.5 |
| Xiangyu Cao | 6.5 | 32 |
| Andesen Ande | 6 | 31.5 |
| Ahmed Salem | 6 | 31 |
| Ben Yoko | 7 | 33 |
| Shahzaib Shahid | 6 | 32 |

*Reported times are rough estimates.

## Plans for the upcoming week

1. Continue to test schottky diode's response to AC input and give a final assessment - Cao, Andesen, and Jordan
    a. Figure out if the output for the schottky diode is a viable output for the low voltage booster
    b. Have one team member search for a better suitable diode
2. Find a way to successfully test the low voltage booster- Ben, Ahmed, and Shahzaib
    a. Make a decision on whether we need to create our own booster or order a different one
3. Find the actual capacitance of the supercapacitor (Ben) and assemble all components to have a complete breadboard prototype- all team members