EE 491 Weekly Report
MAY15-29   Week 11 (11/10/14-11/16/14)

Advisors: Meng Lu   **Client:**

Members (roles): Wenbing Ma（coding）, Jiangxiang Zhang, Xuan Zhang (Webmaster) , Zhikai Cui (Leader), Chenyin Liu(sample holder design)

Project Title: A high resolution two-dimensional ultrasonic detector using plasmonic crystals

Weekly Summary： Members did well job in the past week. The optical setup is

almost done and we are on the way to finish the main part of the whole project. As the DAQ and capture code get ready, we will be able to sketch the information such as wavelength for the wave generated by accustic wave transducer.

Meeting notes:

11/15   Group Meeting with Advisor

Duration: *60min*   **Members Present:** *All*

Purpose and Goals:
1. Finish the rest of testing
2. check problems happened during the test.
3. Upload the website to Iowa state domain website.

Achievements:

1.Almost finish the code for DAQ. The only thing left is graphic for C# code

2. A 850 nm laser diode has been installed.

3. The whole Optical setup (including a 850nm laser diode) is almost complete.

Pending issues

1.Make sure the setup of sample holder (including sensor) has no problem with water leakage.

    -Packaging the sensor on the sample holder with tape carefully might be
    considered as a solution.
    -Stick the sensor on the bottom of sample holder with gule is another option.

Plans for next week

Wenbing Ma & Zhikai Cui
- Trying to finish the coding for "graphic" function and see if the data can be acquired properly
- Receive DAQ and test it
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Jiangxiang Zhang:
- Complete whole optical setup.
- Testing the performance of sensor based on the optical setup.
- Make adjustments of the optical setup if necessary.
- Resign the 3D diagram of the whole optical setup due to the change of requirment.

Xuan Zhang & Chenyin Liu
- Website
- Use a speaker instead of the acustic wave transducer to do the first expriment
- Test the sensor and try to collect the first version of data
- Wenbing and Zhikai will sketch the data into scope and figure
- Be ready to take picture within CCD camera

Individual Contributions (this week)

- Wenbing Ma attended the meeting(1hr), Wrote code forDAQ using microsoft studio on individual laptop(8hr) Search for the imformation for Zedgraph and StreamWriter(4hr)
- Jingxiang Zhang attended the meeting(1hr), installed a 850nm laser diode(2hr), finished a part of optical setup(5hr).
  - Xuan Zhang attended the meeting.(1hr) Help Jingxiang to finish the optical setup. (7hr)
  - Zhikai Cui attended the individual meeting（1hr), test and get the transducer get to work(2hr). Search for tutorials for Universal libraries(2hr). Wrote code for Universal Libraries on individual laptop(4hr).
  - Chenyin Liu attended the meeting.(1hr), Help Jingxiang finished the optical setup.(7hr) Take some material to set up the CCD camera in order to be ready for the shooting picture step.

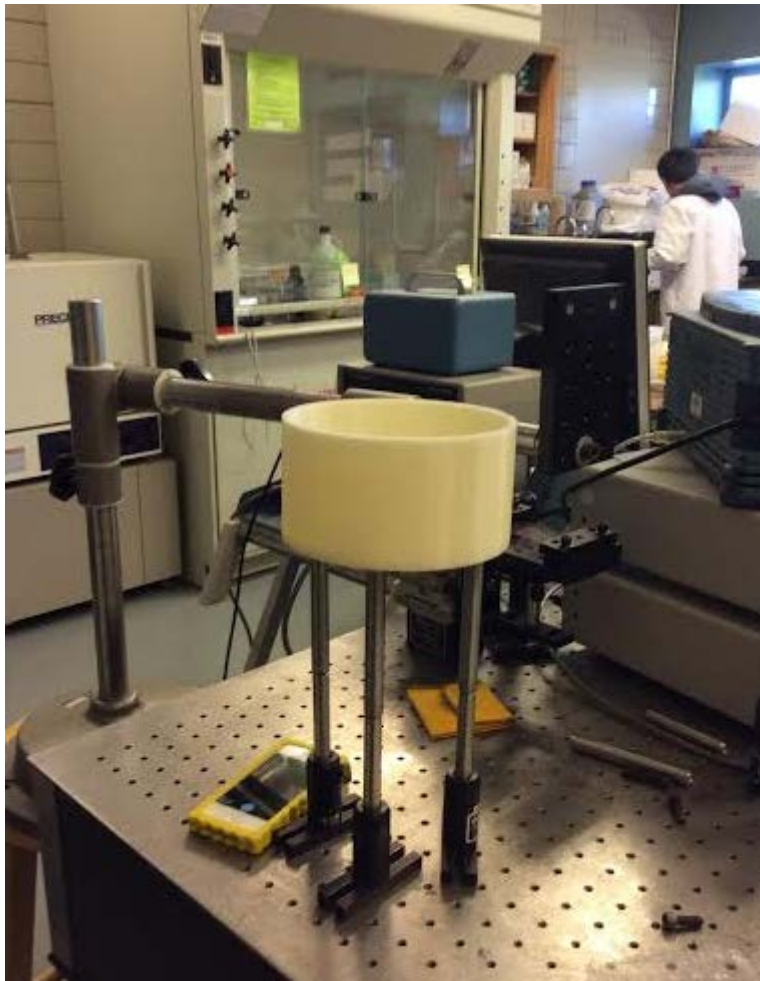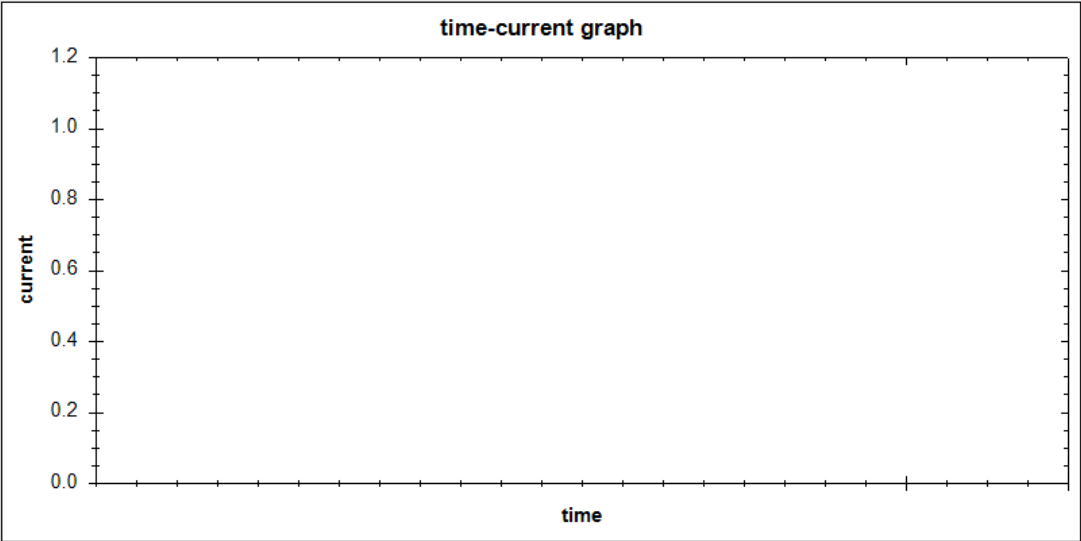## Total contributions for the project

Wenbing Ma (13hr)
Jingxiang Zhang (8hr)
Xuan Zhang (8 hr)
Zhikai Cui (9hr)
Chenyin Liu (8 hr)

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time-current graph

current

time

Start   stop

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Analog Input   DISP