

DLA Report 1

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1 Description of what was done

Since joining the lab, I have been doing a lot of on-boarding work. In particular, I have attended my first few group meetings and my first water table team meeting. To get acquainted with the theory, I have also read through the references at the end of the Written Agreement, focusing on the FS-SS paper. I set up a meeting with my graduate advisor Sam Ryskamp about clarifications for FS-SS and what steps I should be taking based on previous work done by former lab members and the resources available to me (Matlab code, DHL Google Drive, and former members). I asked lots of questions about FS-SS and now have a solid understanding of what next steps I need to take and how to take them.

2 Description of next steps

Moving forward, I will begin looking at how to implement FS-SS. This includes looking at existing software from the author of the FS-SS paper, open-source material (ex. OpenPIV), and code written by former DHL members. Apart from software, I will also be working at the lab to get familiar with the physical devices I will need to use. For one, I need to understand how to get the camera to work, its resolution, and various settings. I will review the information in the Google Drive for the best camera settings for FS-SS. I will also need to set up a control apparatus for testing my FS-SS implementation. One option is to use a clear tray holding water. Another option is to machine two pieces of clear plastic - one of which will be the control (a flat piece of plastic) and another being the test (a wave form is machined into the plastic). The second option is what I will pursue first since it will provide the most stable testing conditions for FS-SS. I also like that option because I will get machining experience which I wouldn't have gotten otherwise by doing pure APPM and CS.

3 Questions

I don't have many questions since I was able to resolve most of them in-person with Sam after our group meeting on September 7 along with our virtual meeting

on September 3. The only question I have is: what are the credentials to log into the computers in the lab?