

Push to the Finish

Weekly Report 5/14/18 to 5/20/18

With the stress of AP testing finally over, I managed to finally get refocused on ISM. During the week I did a few more tests of my printer with attempting to print several complex structures which, to my surprise, my printer was able to successfully print. During the week I was also able to have a “mentor visit” with Dr. Choi, however due to him being in South Korea for a business trip, we had to arrange for a Skype call rather than meeting in person. Throughout the duration of the call we discussed various aspects of my printer such as the quality I was able to achieve as well as the possible applications for building such a machine. Dr. Choi explained how there could be several education applications with printing chemistry models which would be quite helpful for students while I also brought up the idea of printing chainmail which could be flexible after removing from the print bed. In addition, we also discussed ways that the printer could be improved such as adding additional cooling or additional bracing to the frame in order to dampen vibrations during printing. During this visit I also managed to mention how I had used my printer for rapid prototyping earlier on when I designed and printed a spool holder bracket for the printer. With the knowledge I gained from this visit, I immediately went to work testing out complex structures such as molecular models for particles such as diamond and a NASA-designed chainmail which I had found to be quite interesting. The printer in the end managed to print both of these structures successfully and allowed me to deem my final product complete. With final presentation night approaching fast, I must remember to stay focused and ahead of my work despite the year coming to a close.