Final Funai report

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I sure feel nostalgic now that I am leaving my grad school after 5 years.

Even though I repeatedly mentioned to everyone including my PI that I am graduating in March 2018, I ended up staying here and graduating in June 2018. I finished up writing my dissertation in winter and I was ready to graduate but my PI decided to postpone my defense to spring because I was TAing in winter.

The last three months after the winter quarter were very relaxing and worrying at the same time. I waited for the companies that I got interviewed for to get back to me only to find out those positions were filled. The last thing I wanted to do was to take a postdoc position because I wanted to go straight to industry. However, there was one exception for a good reason. While I was looking for a job and writing papers, my co-PI who now is in Liverpool contacted me with information on a postdoc at the University of Hawaii. I didn't even know there is a university in Hawaii and I was not sure about this position because I did not want to go into academia. However, it was for scanning/transmission electron microscope (S/TEM) operation on NASA project and other interesting projects in different fields. They also mentioned that this position could lead to a staff position and lab management position in the future. I was hesitant for a while but then it is in Hawaii! I decided to pursue this career in materials science biased toward S/TEM operation and enjoy Hawaii. After calling my new advisor, who is in the geophysics department, on the phone, everything went very fast. Apparently not so many people in this field know how to work with S/TEMS. To summarize the project that I will be working on, it is to figure out the environment where this solar system was formed. I am going to be looking at compositions and phases of tiny dust coming from space without experiencing severe heat upon entrance unlike large meteorites. These tiny dust particles can contain materials from billions of years ago in the same condition as it formed. From their compositional and phase information, we can tell what kind of environment there was when the solar system was formed.

While I am very excited to be involved in the NASA project, I am also looking forward to working on other projects that come into the lab. In my materials science/engineering career, I would like to keep myself spread out to be involved in different field rather than just focusing on one field. Materials science itself is an interdisciplinary field of study and it is essential to any fields. By working for/with people from other fields, I can enjoy new and fresh technology while using my expertise.

Enough about what's happening in the future, now I would like to talk about the graduation process at UCI, which I think is a bigger deal for many people.

Like any other advancement processes, the graduation process required a lot of paperwork. In order to finish the PhD program, you have to take an oral final exam (PhD defense) along with a written PhD dissertation. Writing the dissertation can take more than three-six months. Luckily, I had paper drafts for my projects and they could directly be chapters in my dissertation. I started combining chapters and writing in September 2017. There was a thesis/dissertation boot camp hosted by the graduate resource center, which was just providing us with a quiet room for a weekend. It was surprisingly effective, and I finished about 70% of my dissertation on that weekend.

When you are almost done with writing (there is no clear end to this thing because you can keep revising indefinitely), you can schedule your defense with your committee members (three). This turned out to be

very difficult because my co-PI needed to fly from Liverpool and he had to apply for a visa, which he could not get until two days before the scheduled date. Therefore, I had to reschedule it so many times. My other committee members were thankfully flexible on that week. Since my co-advisor was not able to come in time, we conducted my defense with him on skype, which is also acceptable as long as I get his physical signature. The presentation was about 45 min long with long questions from my committee members. Most of the questions were about how to expand my work and future work. Since I had given similar talks (summary of my PhD projects) for interviews, I was comfortable with compressing 5-years of work in to 45 min and did not need any practice.

In addition to writing the dissertation, there was another important process I had to deal with as an international student. In order to stay and work in the US without obtaining a working visa or a green card, you have to apply for optional practical training (OPT), which essentially is a temporally working permit for a year with two years of extension. With this permit, you can apply for a working visa, a green card or seek jobs that provides a visa, while you are working, as long as you work in a field related to your major. Application process is rather easy, but it takes 90 days to process. Thus, you have to make sure you will be done with your PhD by the time you receive the permit because your one-year countdown starts on the date you indicated that you are staring even if you are still in school. There is a gray zone of 90 days between your graduation and your employment, where you can be unemployed. Since I knew I am graduating this spring, I applied for OPT so that I can receive the permit (employment authorization document (EAD)/Form I-765) in July (even though I didn't have any concreate confirmation that I have a job in July back then). They sent me a mail saying my application has been approved after about 80 days and a day after that, I received my EAD card.

In the 5 years of PhD program, I learned about confidence and dedication. Most of PhD students who did not succeed as well as those who dropped out, were always unsure of what they are doing and constantly seeking for a guidance. As a PhD student, you have to be proactive and confident about your work. I would say the days you ask your PI what to do next ends when you become a PhD student. You have to work on your own and that should induce dedication toward your projects like they are your babies. Additionally, regardless of the field, reseach is all about the presentation. Even if you have done a tremendous job, if you cannot communicate with other people, it does not mean anything. Presenting your work confidently convinces people and oftentimes that leads to a good discussion. I believe these are the qualification you should develop during your PhD program.

Thanks to the experience I had at UCI, I feel ready and excited for the next step in Hawaii and the career that follows this postdoc. Lastly, I would like to express my greatest appreciation to Funai overseas scholarship for supporting me throughout the 5 years of PhD program. Truly I could have not completed my PhD without their help.