

Paul Rudnicki

Graduation Year: Senior

College: Engineering

Major(s): Chemical Engineering

Minors(s): N/A

Scholar Group Membership: Engineering Honors Program

Did you received other funding for this project?: No

Could you have completed this project without CUSE funding? No

More details on CUSE funding assistance?

Project Title: A comparative study of photosynthetic unit (PSU) models for algal growth rate and fluorescence prediction under light/dark cycles

Project Location: San Francisco, CA

ND Faculty Mentor: Dr. Jason Hicks

Project Type: Conference - Presentation

Why did you undertake this project/experience? Deepen your knowledge of a topic or issue, Prepare for graduate school (MA or PhD)

Did your funded experience help you:

[Deepen your understanding of your coursework or field of study]: Yes

[Discern your interests and post-bac goals]: Yes

[Become confident in your ability to set and achieve your goals]: Very Much

[Gain a more nuanced view of local, national, or global communities]: Not at All

[Improve your written and verbal communications skills]:Yes

Tell us about your experience.

I participated in a range of activities through attending and presenting at the 2016 AIChE Student Conference. I was able to meet peers through attending events such as the opening breakfast, the AIChE Jeopardy competition, and the ChemECar poster session and competition. I attended a graduate school fair on Sunday, and spoke to graduate students and professors from a range of universities, including many that I am currently considering applying to for graduate school. Since the full conference began on Sunday, I was also able to attend a presentation session on computational research related to the type of work I want to do in graduate school, and attend a poster session at which I was able to ask postdocs at universities that I am considering about their research and their experience at their university. I attended university receptions on Sunday night, and spoke to professors about the current state of their programs and about their advice for prospective graduate students. On Monday, I gave my presentation in the Student Poster Competition. I presented extensively to at least two judges, along with several other interested attendees of the poster session. Overall, I learned valuable information about graduate programs, and better understand which fit my future interests. I also learned about how to prepare for a poster presentation, which will be important in my future academic work. I witnessed the strong

community and collaboration within the academic field of chemical engineering, which encouraged me to continue pursuing this field. Finally, I was inspired by some of the exciting new research I saw to look into those specific areas for graduate research.

Describe the impact this project had, both on you as a student-scholar and on the people you worked with.

This project had two major impacts on me. First, it allowed me to have the full experience of presenting at a major conference, from printing and transporting a poster, to preparing and practicing a 5 minute presentation, to explaining my work and its significance to peers, interested faculty, and judges. Some of the people I spoke to conduct related research, and I feel that the results of my work might have given them ideas on how to proceed in the future. I really enjoyed presenting and felt that I learned many lessons on how to give a good poster presentation in my later career. Also, through this project I was able to experience all the portions of a major conference, including small research presentations, large postdoc poster sessions, and networking receptions. Now that I know how a conference works, I will be able to maximize my learning experiences as a graduate student when attending future conferences.

Describe how this experience is connected to your plans as a student or future professional.

I am in the final stages of putting together my applications for graduate schools, and this experience was extremely helpful in getting information on which schools I want to apply to. Most graduate program websites are fairly generic, and it is difficult to discern which schools are doing the best research. However, academics in the field know where the true experts work, and graduate students who go to those schools will give honest appraisals of the strengths and weaknesses of their programs. Therefore, I was able to have many highly useful conversations with members from all levels of academia, which caused me to drop some schools from my list and add others. Additionally, seeing the exciting work done in chemical engineering and the camaraderie between academics encouraged me to continue on a path to graduate school. Finally, I will be more likely to try to present my graduate work as often as possible, since I found it to be a great educational experience and one that is very enjoyable.

What advice would you give other students who are planning to pursue similar projects?

I would tell other students that presenting at a major conference is a great opportunity, and that they should try to experience it if possible. However, they need to plan their travel and time carefully, especially if they are travelling alone, as I was. I would advise them to look beforehand at the conference schedule and find which events are most interesting to them, so that they can plan around attending those events. I would also advise students to practice giving different lengths of their presentation as often as possible, until they are comfortable summarizing their research in any circumstance. They should also make sure they understand their work well enough that they can answer any obvious followup question raised by their presentation. Finally, I would advise other students to make sure that they take advantage of all the benefits of attending a major conference, such as networking with other students and faculty in their field. They should actively

seek out people they admire, since a conference is an incredible chance to interact with people from every level of academia.
