

Paul Nadan

SAG Reflection - Fall 2018

This fall I attended the 2018 ASME International Mechanical Engineering Congress & Exposition (IMECE) to present my research from the past year with Professor Chris Lee on a perching landing gear mechanism that allows drones to land on branches, railings, and other objects when no flat landing area is available. We developed a computational model of the mechanism in MATLAB, which will allow designers to predict which objects the landing gear is capable of grasping and use that knowledge to optimize the mechanism design. We wrote up a paper to present our work at the IMECE conference, and also created a poster to enter the Undergraduate Research and Design Expo.

Presenting at a conference was a great experience, and gave me the opportunity to see what real academic research is like firsthand. A lot of people were interested in my project, and I received some interesting questions and suggestions for my research at both the poster session and the presentation. I got to meet several other undergraduates during the poster session, as well as a couple of graduate students and professors. I was also able to attend several other presentation sessions and learn about some of the latest developments in a variety of mechanical engineering disciplines. One of my favorite presentations described robots created entirely out of paper, which use air pressure for actuation. Another neat presentation was a plenary speaker who talked about current trends in aerospace materials, in particular the use of composites and smart materials that can react to environmental stimuli. The opening presentation for the conference was also really interesting, describing the development of satellites that can attach to older satellites and act as their propulsion system once they run out of fuel.

I am very grateful to SAG for funding my attendance at the conference, and giving me this opportunity to share my research with a broader audience and gain exposure to the world of academic research. I will soon need to decide on my next steps after graduation, and this conference provided a great look at the kind of work I could potentially be part of in a graduate school program.