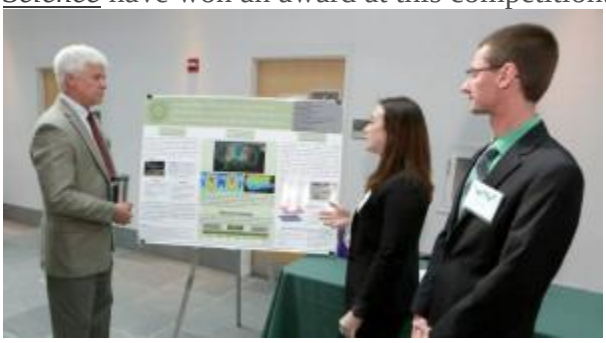
Sustainable Success: SU-IAC Recognized for Third Consecutive Year

Thursday, June 25, 2015, *By Matt Wheeler*

A group of engineering students in the Syracuse University Industrial Assessment Center (SU-IAC) earned third place at the New York State Pollution Prevention Institute's (NYSP2I) Research and Development student research project competition this spring. This marks the third year in a row that students from SU-IAC in the *College of Engineering and Computer Science* have won an award at this competition.



Students present their work at the New York State Pollution Prevention Institute's Research and Development student research project competition.

This year, Jillian Burgoyne, Mike Garrett and Nhan Phan were recognized for using computational fluid dynamics (CFD) in their project to predict how to efficiently reduce thermal stratification at small- and medium-scale industrial facilities. For this work, they used CFD modeling software to analyze how the air moves in large, open warehouse-like spaces based on the aspect ratio of the room and the placement and size of ceiling fans.

The project's goal was to develop a way to determine the optimal placement of ceiling fans for heating and cooling using as little energy as possible, thus reducing natural gas and electricity costs and emissions. The project team hopes to develop a chart that would give a simple tool for facility managers to optimally place fans in any given industrial space based on the size and shape of the room.

Garrett, an undergraduate student in the mechanical engineering program, found that the competition provided valuable experience outside of the classroom. He says, "We were able to take something from the starting phase all the way to the presentation phase. I learned a lot on presenting—how to convey my ideas and findings to someone. I knew the math and fluids part of the equation, but gained experience with presenting complex technical information."

The Research and Development student competition is open to colleges and universities throughout New York. NYSP2I challenged teams of full-time students to identify a specific activity at their university or in their community with a large environmental footprint and design innovative solutions to reduce its impact.

In previous years, the IAC was awarded for its work reducing emissions in Maxwell Hall and harvesting rainwater off of the roof of Manley Field House to be used to water the varsity field hockey field nearby.

“Our students have the unique opportunity to be part of SU-IAC, the only program in New York State, and receive training and industrial experiences beyond the classroom. The knowledge our students gain in the IAC program prepares them very well to solve the challenging engineering problems of the real-world, as demonstrated in these repeat awards won by the IAC student project teams in three consecutive years”, notes Professor Suresh Santanam, director of the SU-IAC.