ABB continues successful history of sponsoring UCF senior student projects

For the past nine years, ABB has partnered with the University of Central Florida to sponsor senior year student projects. What started as a collaboration with the UCF mechanical engineering department, now spans the electrical engineering and computer science departments, creating the opportunity to bring a multidisciplinary approach to the problems ABB presents to the student teams.

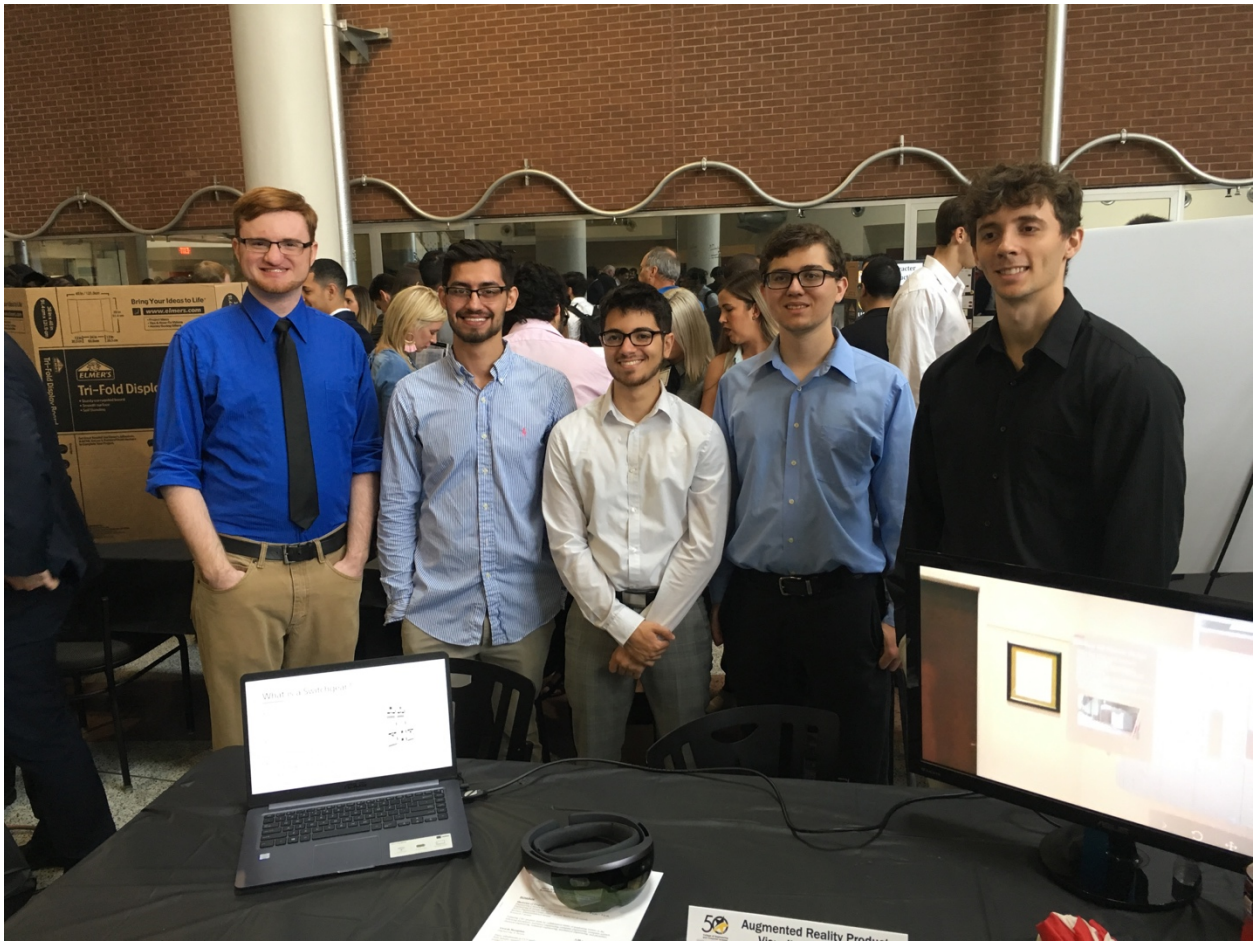
The UCF senior year student projects are two-semester projects that run Fall semester, from August through December, and Spring semester from January through May. ABB provides a sponsorship of $15,000 per project and underwrites any additional costs associated with building and testing the student team design prototypes. The first semester is dedicated to concept development and the second semester to final design, prototyping and testing.

For the 2018-2019 session, ABB sponsored two project teams for the following projects:

1. **Augmented Reality (AR) applications for ANSI switchgear** – The goal of this project was to demonstrate how AR can be applied to ANSI switchgear as a training and marketing tool. One potential use case was proposed for each of these applications. The first use case demonstrated potential marketing applications when exhibiting switchgear at trade shows or live events. The second use case created an interactive technical training guide.
2. **ReliaGear ND breaker compartment ratings extension** - ReliaGear ND is a narrow frame, 26-inch switchgear. ReliaGear ND peak ratings, with the Vmax circuit breaker, are 5/15 kV, 31.5 kA interrupting rating and 2000 A continuous current rating. There is a market need to have a 5 kV and 15 kV, 40 kA, 3000 A rating in the narrow frame. This required the use of a different breaker — the VD4 or the VM1 — and the breaker compartment and part of the ReliaGear ND frame needed to be redesigned to accommodate these breakers.

The student teams presented their work at the UCF Senior Design Showcase on April 19. Subsequently, they visited the ABB offices to turn in their deliverables and transfer the design know-how and documentation. Both projects teams successfully met their project objectives.

The UCF undergraduate engineering program has one of the largest enrollments in the country. ABB's sponsorship brings real-life engineering challenges into the classroom and contributes to the development of the next generation of engineers and computer scientists. It also presents ABB a great opportunity to develop relationships with bright students and gives us access to a talented and tested hiring pool.



Augmented Reality Applications for ANSI Switchgear Project Team

L to R: Joshua Yandell, Alex Ruiz, Daniel Ohana, Alex Acevedo, Joseph Peaden

ABB Advisor: Harsh Karandikar

ReliaGear ND Breaker Compartment Ratings Extension Project Team

L to R: Jessica Dieguez, Morgan Taylor, Daren Fluty, James Nichols, Gabriel Vazquez Ramos (Faculty Advisor) Da Van, Philip Sottile, Samuel Jean

ABB Advisor: Babu Sankar