



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Industrial Solutions Laboratory **Senior Design**

SAVE THE DATE! **KICKOFF FOR FALL 2013 PROJECTS** **Supporter/Project Team Breakfast**

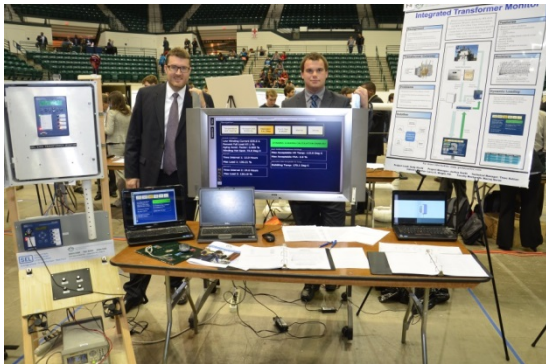
August 30, 2013

7:30 – 11:00 AM

Spring Expo

Forty-three projects were showcased during the Spring Expo. Awards were based on judging by industrial project supporters, project mentors, and selected faculty.

1st Place Bill Heybruck Award ***Integrated Transformer Monitoring System***



The *Integrated Transformer Monitoring System* project, supported by Schweitzer Engineering Labs (SEL), required the design, construction, and testing of a real-time monitoring system for a transformer. Monitoring included oil and winding temperatures, percent water in the paper, bubbling gas temperature, calculation and diagnostics of combustible gas in the oil, dynamic calculation of transformer loading capability, communication with a remote SCADA system, and development of a web based HMI for monitoring and control. Team members were Andrew Gould, Theic Rahlan, and Joshua Smith.

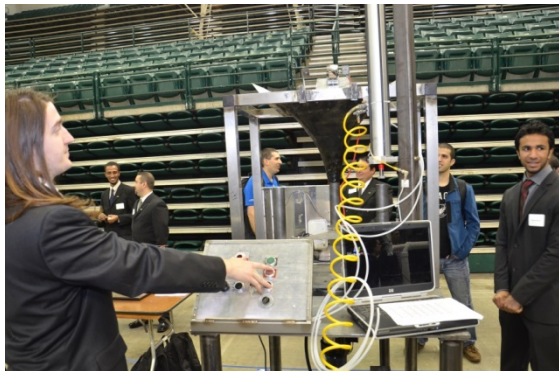
2nd Place Award ***FSAE Chassis***

Supported by UNC Charlotte's Motorsports program, the FSAE Chassis team designed and constructed the 2012 car utilizing parts from and resolving problems that existed on the 2011 car. Team members were Robert Harris, Samuel McAulay, James Rufini, Ryan Shumate, and Michael Skarbowski.



3rd Place Award

Automated Filament Winder



The Automated Filament Winder project was supported by MacLean Power Systems. This project automated a manual assembly operation in the production of a surge arrester in which cylindrical semi-conducting varistors, aluminum spacers, and cast end plugs are loaded into a V-channel and then clamped together while tape is added to secure the components. Team members were Mahanned Alsihati, Faisal Alanazi, Chris Lloyd, Lauren Mallard, Nicholas Perkins, Michael Ponzo, and Jonathan Thompson.

Community Outreach Award

NASA/USLI Rocket

The NASA/USLI project designed and constructed a reusable dual-deployment rocket capable of carrying a designated payload to an altitude of one mile. The team talked to future engineering students at the college's *Discover Engineering* event and helped students at East Alexander Middle School build their own rockets. Team members were Nathan Muller, Michael Denis, Umar Faraz, Josh Moorey, Gabriela Gunther, Peter Sullivan, Mark Sumerlin, and Robert Zenoz. For more information and photos see <http://coe.uncc.edu/orgs/49erocketry/media-3/outreach/>.



THANK YOU TO OUR INDUSTRIAL SUPPORTERS

A special thank you is extended to the following companies who supported senior design projects in fall 2012 and spring 2013. Without you, this program would not be possible.

AREVA
 Carolinas Aviation Museum
 CB&I
 Charlotte Green Initiative
 Charlotte Research Institute
 Char-Meck Utilities
 Chrysler Group
 Concord Terrazzo
 Doosan
 Energy Production and
 Infrastructure Center (EPIC)

EPRI
 Highland Industries
 Huber Technology
 ISP
 MacLean Power Systems
 Matthews Help Center
 MOSAIC
 NASA
 Nirak, Inc.
 National Collegiate Inventors and
 Inventors (NCIIA)

Powerhouse Mechanical
 Radiator Specialty Company
 RSC Chemical Solutions
 Schaeffler Group
 Schweitzer Engineering Labs
 Siemens
 SPX Corporation
 Strategic Power Systems
 USAF Research Lab
 Westinghouse

FALL 2013 SENIOR DESIGN

The deadline for submission of fall 2013 projects is July 1, 2013. The deadline is fast approaching so please submit project ideas to Terry Jordan (tdjordan@uncc.edu), Director for Industrial Solutions Laboratory in the Lee College of Engineering, as soon as possible. Details of project requirements are available at <http://srdesign.uncc.edu/company-information.html>.

2013 SCHEDULE OF EVENTS

Mark your calendars for the following key events in the upcoming 2013-2014 school year.

- July 1 Deadline for fall 2013 project submissions
- August 30 Kickoff breakfast for fall 2013 industrial supporters, project mentors, and student teams
- December 6 Fall Expo, Student Activity Center, OPEN TO PUBLIC at 11 a.m.
- January 17 Kickoff breakfast for spring 2013 industrial supporters, project mentors, and student teams
- May 1 Spring Expo, Student Activity Center, OPEN TO PUBLIC at 11 a.m.



CONTACT US

For information or questions, visit www.srdesign.uncc.edu or contact Terry Jordan at 704-687-5029 or tdjordan@uncc.edu.

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