



UNC CHARLOTTE

*The WILLIAM STATES LEE COLLEGE of ENGINEERING*

# Senior Design Newsletter

Vol. 8, No. 1, January 2013

## 2012 FALL EXPOSITION

The 2012 FALL EXPO was held on Friday, December 7. There were forty Senior Design II projects on display and forty-three Senior Design I posters for projects that will be completed in May 2013. The Senior Design program continues to build momentum with students, faculty, industry and entrepreneurs. Participation continues to grow with the contributions of twenty-five companies, thirty company technical representatives, sixty faculty, staff and industry mentors all supporting three hundred thirty-six senior engineering students.

We had eight finalists for the category of Senior Design II Best Project. These projects were determined by a complex algorithm which included graded submissions from both semesters and recommendations by faculty, mentors and project supporters. The teams were identified at 10:00 AM the day of the Expo. During the Expo, nine independent judges visited all eight projects selected as finalists and scored their presentations. We then selected the top three projects for awards based on these scores. The eight finalists (in alphabetical order) were:

**Chariots for Disabled Children Team 1**  
(Chariots of Freedom)

**Concord Airport Air Traffic Control Tower**  
(UNC Charlotte, Civil Engineering, Technology & Construction Management)

**Expander and Compressor for IPAC**  
(UNC Charlotte, Mechanical Engineering)

**Handheld Magnetic Dust Removal Brush**  
(NASA/UNC Charlotte)

**Laser Scanner with iPad Control**  
(UNC Charlotte, Electrical & Computer Engineering)

**Powered Exoskeletal Shoulder Assistive Device**  
(UNC Charlotte, Mechanical Engineering)

**Solar Cellphone Charging Hub**  
(UNC Charlotte, Electrical & Computer Engineering)

**Structures Science Building**  
UNC Charlotte, Civil Engineering, Division 1

The winning projects were:

**FIRST PLACE WINNER**  
**THE WILLIAM F. HEYBRUCK AWARD**  
**Powered Exoskeletal Shoulder Assistive Device**  
(UNC Charlotte, Mechanical Engineering)



### **SECOND PLACE**

**Laser Scanner with iPad Control  
(UNC Charlotte, Electrical & Computer Engineering)**



### **THIRD PLACE**

**Handheld Magnetic Dust Removal Brush  
(NASA/UNC Charlotte)**



Project descriptions can be found on the Senior Design website at <https://srdesign.uncc.edu/expos/2012-fall-expo>.

**FALL 2013 SENIOR DESIGN**

The deadline for submission of Fall 2013 projects is July 1, 2013. The cut-off date will be here soon so please get your project submissions to Tom Brown, Director for Industrial Solutions Laboratory, the Lee College of Engineering ([tbrow200@uncc.edu](mailto:tbrow200@uncc.edu)) as soon as possible. Details of project requirements are found on the website: <http://srdesign.uncc.edu/company-information.html>.

## FOR INFORMATION OR QUESTIONS

Visit [www.srdesign.uncc.edu](http://www.srdesign.uncc.edu) or contact Tom Brown at 704-687-5029 or [tbrow200@uncc.edu](mailto:tbrow200@uncc.edu).

## THANK YOU TO OUR SUPPORTERS

Thank you to all our Spring and Fall 2012 supporters for your commitment to the Lee College of Engineering Senior Design program!

Areva  
Carolinas Aviation Museum  
Charlotte Green Initiative  
Charlotte Research Institute  
Chariots of Freedom  
Discovery Place  
Doosan  
EPIC  
EPRI

Highland Industries  
Huber Technologies  
MacLean Power Systems  
Manufacturing Labs Inc.  
Metso Power  
NASA  
Nirak, Inc.  
Radiator Specialty Group

Schaeffler Group  
Schweitzer Engineering Labs  
The Shaw Group  
Siemens  
Strategic Power Systems  
URS  
USAF Research Lab  
Westinghouse

## 2013 SCHEDULE OF EVENTS

Be sure to mark your calendars for key upcoming events:

January 25: Spring Kick-Off Breakfast for students, industry supporters and mentors (for Spring 2013 projects)

February 21-22 and February 28-29: Prototype Review Presentations for Fall 2012 projects

March 15 & 22: Conceptual Design Review Presentations for Spring 2013 projects

May 2 (Thursday): SPRING EXPO, Barnhardt Student Activity Center Arena, OPEN TO PUBLIC 11 AM – 3 PM

July 1: Deadline for Fall 2013 project submissions

If you would like to attend a Conceptual Design Review or Prototype Review, send an email or call Tom Brown so he can have a parking token or pass ready when you arrive.

*Please REPLY with "REMOVE" if you do not want to receive future issues.*