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## CEAS e-news 10.07.2011

College of Engineering and Applied Sciences

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Western Michigan University

# College of Engineering and Applied Sciences

Engagement ~ Leadership ~ Globalization ~ Innovation

WMU Engineers  
Help Shape  
the  
Future

October 7, 2011

Anita Ludwig, Editor  
anita.ludwig@wmich.edu

[www.wmich.edu/engineer/news.htm](http://www.wmich.edu/engineer/news.htm)

"Engineering is a great profession. There is the satisfaction of watching a figment of the imagination emerge through the aid of science to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings homes to men or women. Then it elevates the standard of living and adds to the comforts of life. This is the engineer's high privilege." ~ Herbert Hoover

## CEAS News

### WMU Concrete Canoe Wins First For Final Product at ASCE Event



The team consists of 22 members some are listed below.

Captain: Lindsay Mukans

Structural Analysis: Jeff Landers

Mix Design & Testing: Perry Lyford-Stojic

Paddling Co-Captains: Madelen Johnson & Nathalie Hanson

Women Paddlers: Lindsay Mukans, Nicole Clement, Allison Doty, Madelen Johnson, Nathalie Hanson

Male Paddlers: Jeff Landers, Matt Moran, Perry Lyford-Stojic, Tom Wheeler, Andy Peruski, Blaise DiDonato

The ASCE National Concrete Canoe Competition (NCCC) provides students with a practical application of the engineering principles they learn in the classroom, along with important team and project management skills they will need in their careers. The event challenges the students' knowledge, creativity and stamina, while showcasing the versatility and durability of concrete as a building material.

The placing for the team in each category were: 1st place for final product, which includes the boat design and stand design. The 2nd place finish in the races which consisted of sprint and endurance races for both male, female, and coed. This is the most successful year the team has ever had thanks to the two experienced paddlers Madelen Johnson and Nathalie Hanson who trained the team.

The team received a 3rd place finish for presentation which was a tough break for the team having come in first the year before and having high expectations. There was also a 5th place finish for the technical paper and a 3rd place over all finish just missing second place by 2.5 points out of 100 points.



The displayed showcased the canoe design and the materials used.



WMU's 2 person female team competing with *beyond CARNEGIE*.

### The 2010-2011 Steel Bridge Team Placed First in Aesthetics



The 2010-2011 Steel Bridge Team placed first in aesthetics for the regional conference. The steel bridge competition included aesthetics, a timed construction, and load testing. The lead judge of the competition noted that he observed a drastic improvement from the bridge that was submitted in the 2010 competition.

The team had 35 minutes or less to construct the bridge without penalty. Once the bridge was constructed it was tested with different weight loads.

The 2011-2012 team looks to improve from last year with a host of new interested students contributing their ideas and suggestions.

The steel bridge team includes the following students: Aaron Reed, Ethan Clark, Dan Munson, Dan Guastella, Joe Johnson, Telly Townsend, and Zach Deary.



Right/Left: WMU steel bridge team competing in the construction portion of the competition.



## CEAS Engineering Expo 2011

The Engineering Expo took place in the main lobby of the Engineering and Applied Sciences Building on WMU's Parkview Campus. There was a range of job opportunities for engineers showcased during a recruiting event that took place on September 29<sup>th</sup>. The expo was free and open to the public, but geared for WMU students and recent alumni in engineering-related fields. Those who attended were able to network with employers as well as discuss current and future employment opportunities. In addition, some participating employers scheduled next-day follow-up interviews.



Representatives from more than 80 companies were on hand to promote their organizations and recruit for internships and full-time, part-time and co-op positions. Among them were 2011 sponsor, Gentex Corp., as well as Chrysler, Compuware, Consumers Energy, Domtar, Georgia Pacific, Kellogg, Nissan North America, Parker Hannifin, Perrigo, Skanska USA and Stryker.

"Networking with potential employers is a natural part of career planning. Any chance students have to highlight their course projects, leadership activities and co-op experiences strengthens their job prospects," says **Christopher Sell**, WMU assistant director of Career and Student Employment Services. "Employers are routinely impressed with the quality of our alumni."

## Paramount Charter Academy Third Graders Tour



Above: Dr. Jorge Rodriguez explains the chainless hydraulic bike. Earthquake and egg drop challenges were on the schedule for the Paramount students that toured the College of Engineering and Applied Sciences last week. Activities included riding the

## GMI Team Receives MRC Award of Excellence



Left to right: Dr. John Patten, Gary Nola, Andrew Gabriel, Ana Perez, Nathan Christensen, Mike Biro, Dr. David Meade, John Ihling & Carey Schoolmaster. Not pictured: Sean Derrick, Trevor Williams, & Ryan Kamm.

The Michigan Recycling Coalition's 2011 Award of Excellence was earned by Western Michigan University's Green Manufacturing Initiative. The MRC Award of Excellence recognizes only one entity that achieves the most innovative and inspiring program in the state of Michigan.

According to Kerrin O'Brien Executive Director at MRC, the Green Manufacturing Initiative was chosen to receive the award for a number of compelling reasons. Their innovative university-industry based research collaborative is comprised of WMU faculty, students, staff, and industry partner companies. The consortium helps companies assess what projects they should tackle to reduce the environmental and energy impact of their designs, materials, processes and facilities, with a focus on efficiency. Many of these companies are interested in moving from recycling to eliminating waste completely. Product stewardship is a policy approach in which the producer's responsibility for their product extends to the post-consumer management of that product and its packaging.

This approach is gaining momentum. As manufacturers begin to explore the entire lifecycle of their products they often need technical assistance and expertise to eliminate waste created in manufacturing, the supply chain, and at the product's end-of-useful life. The Green Manufacturing Initiative provides needed expertise to industry to reduce negative impacts and improve products at the beginning of their life, a key to building sustainability into our lives.

The Michigan Recycling Coalition is a 30 year veteran advocate for waste reduction, recycling and composting. The membership organization serves professionals in both the public and private sector who provide recycling services in one form or another to businesses, governments and institutions. For more information, visit their website at [www.michiganrecycles.org](http://www.michiganrecycles.org).

hydraulic bike to imagining being an engineer that had to build a structure to safely hold a generator on the top floor of a building. Prior to their visit, they were given a 12"x12" piece of cardboard, 10 rubber bands, and 20 paper-clips to build their structure in class. Then the structures were boxed up and brought to the lab. The CEAS Challenge Coin represented the generator. They were tested on the top of the lab building to see if they could survive a simulated earthquake. The students had fun and many structure designs withstood the earthquake.

Another lab had the students build a container to protect an egg from a 1, 2, and 3 meter drop. They were given a box of toothpicks, 6 straws, and 3 pieces of 8"x8" paper to construct their design. The record for the highest drop of the day was 2 meters. The challenge showed some impressive ideas and designs, given the students only had 15 minutes to create them.



## Congratulations to the 2011 CEAS Alumni Excellence Academy Award Recipients

Alumni Excellence Academy inductees have embraced the expectations of our graduates to change the world. Each of these distinguished alumni has achieved a high level of authority within their chosen profession, have benefited significantly the mission of their organization, and have demonstrated personal integrity of the highest caliber.



**Patrick B. Armstrong**  
BS '86  
President, CEO  
Armstrong International



**Dr. Farshad Fotouhi**  
BS '81  
Dean, College of Engineering  
Wayne State University



**Thomas E. Gross Jr.**  
BS '83  
President, Founder  
Cornerstone Advisory  
Group, Inc.



**Larry D. McArthur**  
BS '65  
CEO, (retired)  
Ascent Logic



**Donald P. Rizzetta** BS '66  
Senior Research Aerospace  
Engineer, Computational  
Sciences Ctr. of Excellence  
Vehicles Directorate, Wright  
-Patterson Air Force Base



**Douglas Szopo**  
BS '73  
Executive Director  
Global Product Planning &  
Strategy Ford Motor Co.

## CEAS 2011 Faculty Staff Awards

Congratulations to the 2011 Faculty and Staff Award recipients. The following award were presented and the all-hands meeting in September:

Outstanding Staff Award went to **David Florida**, Electrical and Computer Engineering.

Outstanding New Educator Award went to **Peter Gustafson**, Mechanical and Aeronautical Engineering.

Outstanding Researcher Award went to **Daniel Kujawski**, Mechanical and Aeronautical Engineering.

Outstanding Educator Award went to **Lois Lemon**, Paper Engineering, Chemical Engineering, and Imaging.

Outstanding Service Award went to **Joe Petro**, Industrial and Manufacturing Engineering.

Outstanding New Researcher Award went to **Xiaoyun Shao**, Civil and Construction Engineering.



L-R: Peter Gustafson, Daniel Kujawski, Lois Lemon, Xiaoyun Shao, David Florida, Joe Petro, and Dean Anthony Vizzini.

## Traffic Bowl Team One of Nine Teams in North America to Advance to International Competition



L-R: Chelsea Griffith, Mr. Robert Wunderlich, the International President of ITE, John Sendor, and Griffin Enyart.

This year the Collegiate Traffic Bowl Program had student teams from 58 universities that competed at the section and district levels, WMU's Civil Engineering student team did very well competing to become district champions. This earned them a place at the International Institute of Transportation Engineers, ITE Traffic Bowl competition held in Saint Louis. Our team was one of only nine teams in the North America to advance to the final through the district-level competition.

The ITE Collegiate Traffic Bowl encourages students to become more active members in ITE, to enhance their knowledge of the traffic/transportation engineering and planning profession and of ITE itself, and to strengthen the programs of the ITE student chapters.

As an international educational and scientific association, ITE transportation professionals are responsible for meeting mobility and safety needs. They help with the application of technology and scientific principles to research, planning, functional design, implementation, operation, policy development and management for all modes of surface transportation.