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College of Engineering and Applied Sciences

Western Michigan University
College of Engineering and Applied Sciences
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WMU Engineers Help Shape the Future

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"Linux is user-friendly; it's just choosy about who its friends are." ~ Anonymous

CEAS News

CEAS Students Win Stryker Challenge for the Second Consecutive Time

The student team from the WMU College of Engineering and Applied Sciences finished first place in the second Stryker Engineering Challenge on November 11, 2011. Stryker sponsors this competition as part of their efforts to strengthen ties with schools from which they recruit engineering talent.

Engineering students from WMU, the University of Michigan, Michigan State, Notre Dame, and Purdue built "contraptions" to deliver different sized balls to scoring positions in a timed competition. The competition rules were explained at a Thursday evening meeting. Student teams then worked non-stop to complete their designs for the competition held the next Friday afternoon. Teams were provided with identical raw materials to build their machines. Each team completed the same five courses to test the ingenuity of their creations. The WMU design featured an arm that could be lowered, raised, and extended via electric motors. A bucket at the end of the arm, also under motor control, could be tipped to deliver the balls to a target location. The design was cited by Stryker employees as being a particularly elegant solution. They also noted the excellent teamwork of the WMU students.

The winning WMU Stryker Challenge Team: Jolica Dias, Ben VanDyken, Ria Pereira, and Avin Castelino

A different student team from WMU won the inaugural competition against the same schools earlier this year.

Industrial Manufacturing Student Team Wins First Place at the ProModel's Competition

L-R: Sandra Petty (ProModel Academic Coordinator), Kyle Naumann, Anna Kamphaus, and Kimberly Harms.

The CEAS Industrial Manufacturing Engineering student team received the first place award at the MedModel in the ProModel's Student Academic Competition held in conjunction with the 2011 ProModel Solutions Conference. And they did so without having to go through the final round of judging because the judges stated the team's report was of such high quality. The team members include IME Masters students Kimberly Harms, Anna Kamphaus, and Kyle Naumann. The competition is for currently enrolled graduate and undergraduate university students. The students are invited to participate in one of three simulation contests using ProModel technology to design or improve a process or product/project portfolio in a company or organization. The winning team was awarded a $2000 cash prize and the opportunity to communicate with simulation professionals from the Department of Defense, manufacturing, and service industries. They also had the chance to interview for simulation internships and employment.

WMU faculty **Damon Miller,** ECE and **Fred Sitkins,** IME were the team coordinators for both competitions. The winning WMU team members are: **Jolica Dias**, **Ria Pereira** both Electrical Engineering, **Avin Castelino**, and **Benjamin VanDyken** both Mechanical Engineering. These students also received an Apple iPad2 and an internship interview with Stryker.

Contributors: Shaelie Lambarth Stryker Corp, Damon Miller, & Fred Sitkins WMU.

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CEAS Industrial and Entrepreneurial Engineering Team Takes 3rd Place in Accelerate Michigan Competition for $10,000 Prize

L-R: Dr. Steven Butt, Dr. Tycho Fredericks with student team members Joe Fodo, Dan Panozzo, Evan Maltas, and CEAS Dean Dr. Anthony Vizzini

Speaking from experience I am confident most would agree that backing up to align your vehicle with a trailer by yourself can be a frustrating challenge. Three students from WMU's College of Engineering and Applied Sciences came up with an idea to remedy this problem and it really paid off.

Winning 3rd place out of 298 student entries **Dan Panozzo, Evan Maltas**, and **Joe Fodo** were awarded $10,000 at the Accelerate Michigan Innovation Competition for their"Quick Hitch" idea.

The improved trailer hitch design is specifically made to help an individual connect their vehicle to a trailer without numerous attempts or the aid of someone waving back and forth in an effort to try and guide you somewhere close to the spot you need to be. The hitch telescopes and rotates 180 degrees making it a much less challenging task to connect to a vehicle. The innovative hitch does this without losing any of the strength of a regular hitch.

Dan, Evan, and Joe are all students in the Industrial and Entrepreneurial Engineering Program. Their product Quick Hitch, was developed in the product design course, IME 3010: Entrepreneurial Engineering II taught by **Drs. Steven Butt, Tycho Fredericks, Azim Houshyar, Bob White** and **Mr David Middleton** who are all very proud of the team's accomplishment, additionally the Quick Hitch group collaborated with **Dr. KC O'Shaughnessy**, Haworth College of Business, and his business students to gain valuable market insight.

The Accelerate Michigan Innovation Competition was held at Eastern Michigan University's Eagle Crest Resort and the winners were announced Nov. 17th. The competition targets student concepts with longer-term business viability with potential to generate an immediate impact on Michigan's economy. With more than $1 million in cash winnings, the Accelerate Michigan Innovation Competition is the world's largest business plan competition.

David Florida Receives WMU's Make a Difference Award for Fall

Congratulations to David Florida on his receiving the Make a Difference Award for this Fall semester, he will be presented with his award at the Make A Difference ceremony being held on Monday, December 5th, 2:00 p.m. This qualifies him for the annual award also, which is held at the end of the academic year. Once the recipients are announced there will be a website open where the campus community can support his nomination.

Upcoming Events:

Senior Engineering Design Presentations
Fall Commencement

CEAS Alumni Wins Big at Accelerate Michigan Competition

WMU alumni Tom Gross (BS '83) is the CEO of Fusion Coolant Systems (FCS), leading the company's commercialization strategy and technology transfer efforts. FCS is a National Science Foundation grant funded clean-tech spin off from the University of Michigan's Engineering School. FCS products offer productivity improving "Green" metal working cooling and lubrication advantages to the machine tool and metal cutting industry. Tom and his professional team from Fusion Coolant Systems competed at the Accelerate Michigan Innovation Competition and won 2nd place out of 312 company entries and were awarded $150,000 for their advanced coolant and lubrication system used in manufacturing. Companies competed for prizes ranging from $10,000 to $500,000. Tom is also a 2011 distinguished alumni recipient from the College of Engineering and Applied Sciences.

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Society of Women Engineers Hosts Engineer for a Day Event for Girl Scouts

The Society of Women Engineers (SWE) presented its Annual Engineer for a Day workshop at the Parkview Campus. Middle school Girl Scouts from a local troop completed hands-on, problem-solving and learning activities to simulate what engineers do. Along with the day's activities the scouts toured the Parkview Campus and learned why a concrete canoe floats, how a race car is designed and built, and what type of careers are open to those who major in engineering.

One of the Girl Scout leaders who attended said that Troop 237 had a BLAST at the Engineer for a Day event. There were so many hands on activities and descriptions that the girls were sparked with enthusiasm. She said that she was sure that at least 1-2 girls have decided on a new career path.

Girl Scout teams participating in the structure challenge to see how many cans their structures could hold before collapsing, 6 cans was the most held and this team was the overall winner.

SWE members, volunteers, and Girl Scouts group shot.

American Society of Engineers Hosts Industry Roundtable Event

There were over 10 industry members that came to Parkview for this event. This Roundtable provided an opportunity for the students to discover the different areas of the Civil Engineering field and network with Southwest Michigan American Society of Civil Engineer members pictured below.

Electrical and Computing Engineering Department Hosts Workshop for Mattawan Middle School Group

The group pictured left, from Mattawan Middle School attended a workshop and toured the Parkview Campus. **Dr. Gesink** and **Dr. Johnson** of the ECE Department planned the event and the activity for the middle school students. The students arrived around 9:30 a.m. and toured the college, then after lunch they joined Dr. Johnson and student lab instructors for a hands-on laboratory workshop. The activity centered on looking at the electronics and LCD display characteristics of a photo viewfinder.