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November 22, 2013

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"An expert is a man who has made all the mistakes, which can be made in a very narrow field."
~ Neils Bohr



CEAS News

WMU Engineering Students Compete in Fourth Stryker Engineering Challenge

A team of WMU engineering students participated in an engineering design competition sponsored by Stryker on October 24-25. The competition featured teams from the University of Michigan, Michigan State, Purdue, WMU and a joint UM/WMU team. Student teams worked through the night to construct a wheeled device to drill a precisely located hole; accurately cut out a section of material; and electronically signal an ambulance cot to rise, enabling the device to traverse a gap between two platforms. The team from WMU was in second place after the first two events in part due to their cleverly designed laterally moving tool holder; unfortunately, their device, which succeeded in lowering the cot during test runs, was likely damaged during the competition, did not complete the final event, resulting in a fifth place finish. The University of Michigan team won the competition. Previous WMU teams earned one second place and two first place finishes in this annual competition. WMU faculty **Dr. Damon Miller** and **Professor Fred Sitkins** serve as team coordinators.

~Damon Miller, contributor.



L-R: Prof. Sitkins, Andrew Verstraete, Dr. Miller, Luke Bednarczyk, Mashruka Mahmud, and Nathan Bowen with their design at the 2013 Stryker Engineering Challenge.

Photo: ~ WMU Professor Dr. Ikhlas Abdel-Qader.

WMU Chapter of Engineering Honor Society Recognized at National Convention

The WMU Michigan Kappa Chapter of Tau Beta Pi was recognized for "conducting a superior program of chapter projects and activities" at the 2013 National Convention hosted by Iowa State University via a Chapter Project Award. Tau Beta Pi is an engineering honor society that recognizes "distinguished scholarship and exemplary character" [tbp.org]. The Michigan Kappa Chapter earned a Secretary's Commendation, was acknowledged for excellence in recruiting new members, and was recognized for building a wheelchair ramp for a family in southwest Michigan, with the help of a Tau Beta Pi Greater Interest in Government Program grant.

~Damon Miller and Sara Vicary, contributors

Pictured left is Tau Beta Pi President Larry Simonson presenting one of four chapter awards to mechanical engineering student and TBP officer Sarah Vicary at the 2013 Annual Convention.

Photo ~ Ray Thompson, TBP System Administrator and Photographer



Upcoming Event

[Senior Engineer Design Conference - Tuesday, Dec. 3rd](#)

The Medieval Engineering Trebuchet Team (METT)



METT recently hosted a pumpkin chucking demonstration at Gull Meadow Farms with their own student designed and constructed Trebuchet. The organization is 1.5 years old and it is making great strides towards the ultimate goal of forming an intercollegiate competition. L-R pictures from the event, members include: Frank Calabro-president, Adam Barnier-vice president, Andrew Seurnyk-lead builder, Mark Brown-lead designer, Holly Gadzinski-treasurer, AJ Biscupski-event coordinator, Matthew Amstutz-secretary, Wesley Jonik, Nicholas Parshall, Mitchell Kooi, David Wilson, and Greg Bosma. Professor Fred Sitkins is the faculty advisor for the organization.



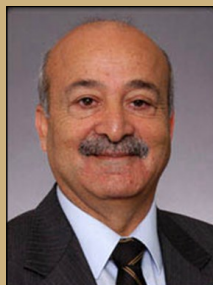
SAE Competes at the Backwoods Baja Competition

Recently our Baja SAE team traveled to Arkansaw, WI to compete in Backwoods Baja 2013 hosted by the University of Wisconsin-Stout. The qualifying race started with the drivers on one side of the pits and the cars on the other (one car per school only). When the signal was given, the drivers raced across the pits to their cars and got buckled in by 2 waiting team members. Once buckled in, the drivers were free to take off for the 3-lap qualifier. After a couple hangs ups unfortunately our team was unable to make up ground because of a bent throttle linkage that limited the top speed of the car. After the qualifier, the team fixed the linkage issue and rolled up to the starting grid for the first endurance race. The early lead went to car #89 for the University of Wisconsin-Madison while we fell in line mid-pack nicely holding our own. The second half hour saw the chain slip off early which cost us some but we was still over 3-hours of racing left. At the end of hour 1 the car was plagued with another throttle linkage issue but the team was able to come up with quick fix and have the car back out with a new driver with only about 15 minutes of time lost. The car suffered yet another chain issue that took the team out of the first endurance with about 10 minutes remaining. During the intermission we were able to get the chain back on, but with only a few minutes left we noticed that one of the welds on the engine mounts had failed. With some help from the University of Iowa we got the mount welded back together and only lost a few minutes to the rest of the field. The next half hour saw the chain fall off 2 more times before we finally figured out the alignment issue and got it to stay on for the rest of the day.

Our team finished a very respectable 7th out of 16 teams from 9 different schools. Our car was able to avoid major failures that plagued many teams which is half the battle in these events. We came back with lots of insight and new ideas to move forward with improvements on the current vehicle for the coming 2014 competition season. We plan to implement many of these upgrades over the next couple months and have the car ready to go again in February for Winter Baja at Michigan Tech. While at the event, one of our team members overheard someone saying that they had come out just to watch Western's team race! Knowing that someone had driven out to the race just to watch us, got everyone on the team pretty excited.

~ Alan Meinecke SAE Chapter President, contributor

Abubakr Elected Commissioner for The Engineering Accreditation Commission



Dr. Said Abubakr

Dr. Said Abubakr, the Chair of the department of Chemical and Paper Engineering, was elected by the Education and Accreditation Committee of the American Institute of Chemical Engineers (AIChE) to be a Commissioner for The Engineering Accreditation Commission (EAC). There are seven commissioners representing AIChE. Commissioners serve as team chair for ABET site visits for five years. Dr. Abubakr is also a Fellow of AIChE. There are four ABET accreditation commissions (engineering, applied science, computing and technology) that lead and conduct accreditation activities. The commissions are responsible for reviewing educational programs and providing decisions about their accreditation. The commissions make the final decisions about all program accreditation actions, except for appeals. Each accreditation commission is responsible for the continuous review and enhancement of its particular criteria, policies, and procedures.

Carr Awarded National Science Foundation Grant

Dr. Steven Carr of WMU and Drs. Jean Mayo and Chaoli Wang of MTU, have been awarded \$199,164 from the National Science Foundation (NSF) to develop materials to educate students on modern access control models and systems. The Computer Science department at WMU will use the award to support a graduate student who will build a software system that implements computer system security policy. That software system will be used to teach various aspects of computer security to undergraduates.



Dr. Steven Carr