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College of Engineering and Applied Sciences

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2012 CEAS Outstanding Seniors

2012 CEAS seniors with the highest grade point average were recently recognized for outstanding achievement in their individual fields of study. Dr. Tony Vizzini, Dean of CEAS sponsored the awards luncheon for the seniors. The event was held at the ParkView on the CEAS campus. As part of the ceremony, the seniors were presented with plaques reflecting their accomplishment. In addition each student recipient named a faculty member who has been an important influence on their academic careers, and they too were presented with a plaque for their role.

This year's senior recipients and their major are:

**Ryan Audwinto**  
Paper Engineering-Process (PCI)

**Tony Bienz**  
Manufacturing Eng. Technology (IME)

**Dionisio V Del Orbe Henriguez**  
Aeronautical Engineering (MAE)

**Andrew Dobbs**  
Construction Engineering (CCE)

**Andrew Dreikosen**  
Engineering Management Technology (IME)

**Zachary Fillmore**  
Industrial & Entrepreneurial Engineering (IME)

**Samantha Hamman**  
Imaging-Business (PCI)

**Jian He**  
Engineering Design Technology (IME)

**Peter Holvenstot**  
Computer Science-Theory & Analysis (CS)

**Nick Loedeman**  
Mechanical Engineering (MAE)

**Adam Mueller**  
Civil Engineering (CCE)

**Stephen Norton**  
Computer Science-General Option (CS)

**Courtney Rousseau**  
Civil Engineering (CCE)

**Welby Seely**  
Computer Engineering (CS)

**Tiffany Sherburn**  
Chemical Engineering-Life Sciences (PCI)

**Katrina Snyder**  
Electrical Engineering (ECE)

Recognized faculty members and their department are:

**Dr. Larry Ahleman**  
PCI

**Dr. John Cameron**  
PCI

**Dr. Paul Engelmann**  
IME

**Dr. Donna Kaminski**  
CS

**Dr. James Kamman**  
MAE

**Dr. Mitch Keil**  
IME

**Dr. Andrew Kline**  
PCI

**Dr. Yufeng Hu**  
CCE

**Dr. Larry Mallak**  
IME

**Dr. Damon Miller**  
ECE

**Dr. John Patten**  
ME

**Dr. Pingbo Tang**  
CCE

**Dr. Bob White**  
IME

2012 CEAS Outstanding Seniors

WMU Chemical Engineering Senior Maria Iaquaniello, Named Academic All-Mid-American Conference

Congratulations to WMU Senior Maria Iaquaniello, who was named to the Academic All-Mid-American Conference on Monday, April 16th. Maria plays guard for the women’s basketball team, while majoring in chemical engineering with triple minors in math, chemistry, and biology where she maintains a 3.49 GPA. The Academic All-MAC honor is for a student-athlete who has excelled in athletics and academics. To qualify, a student-athlete must have at least a 3.20 cumulative GPA and have participated in at least 50 percent of the contests for that particular sport. The Academic All-MAC team is voted on by faculty athletic representatives at MAC institutions.
Dr. Edmund Tsang Received the Inaugural Service Learning Award

Dr. Edmund Tsang received the top honor at the inaugural Western Michigan University Service Learning Awards recently. Dr. Tsang was awarded first place in the faculty/instructor category for his dedication to outstanding service-learning. Tsang is the Associate Dean for Undergraduate Programs and Assessment for the College of Engineering and Applied Sciences and is founder and director of the Center of Excellence in Engineering Education (CEEE). The CEEE supports the faculty’s work in improving student learning and is a symbol of the College’s commitment to excellence in teaching and learning. The criteria for the award winners are as follows:

- Engagement in service-learning, defined as a mutually beneficial endeavor in which course learning objectives are met by addressing community-identified needs.
- Engaged in service-learning that includes reflection of the work, interactions, and learning regarding the service.
- Effective collaboration among community partners, students, and professors/instructors/staff.
- Finding innovative solutions to problems. Projecting a positive attitude and/or promoting a positive image of the University and service learning.

Dr. Anthony Vizzini Appointed to State Board of Professional Engineers by Governor Snyder

Dr. Anthony Vizzini, PhD, PE dean of the College of Engineering and Applied Sciences at Western Michigan University, has been appointed to the State Board of Professional Engineers. Dr. Vizzini will represent professional engineers for a four year term that expires on March 31, 2016. Prior to coming to WMU, Vizzini taught at Mississippi State University and the University of Maryland, where he founded the Composites Research Laboratory. He received a bachelor’s degree in mathematics and a master’s degree and Ph.D. in aeronautics and astronautics from the Massachusetts Institute of Technology.

The Professional Surveyors and Professional Engineers groups were created in 1980; these groups regulate the practices of professional surveyors and engineers. The Governor shared that these boards play a vital role in the safety and advancement of Michigan. Snyder was confident that these experienced individuals would bring new ideas and a commitment to excellence to the boards.

Team 1677 Quantum Ninja Win FIRST Robotics Competition


Not pictured: Sam Wachowski, Marty Graube, Grey BreyBrooks, Xanthe Van Houten.

Students from across the state, their parents, and volunteers attended the FIRST Robotics Competition (FRC) at Gull Lake High School. Teams came from across the state, from Boyne City to Zeeland. In all, 36 schools entered bots in the contest and for some teams this was an opportunity to qualify for a trip to Eastern Michigan University for next month’s State Championships.

The robots were designed and programmed by the student teams. Then the robots had to ramble across a small court, cross over balance beams and pick up a small ball and shoot it into a net. For six weeks the student teams put in numerous hours of work after school almost every day to design, construct, and program the robots.

The teams have to strategize, conceptualize, sketch and design, develop the prototype, test and program before undertaking the complete fabrication of the robot. The fabrication starts with supplied kits of about 45%-50% of all parts & components on the day of national webcast. The finished robot gets bagged and tagged to meet the completion deadline.

Dr. Tarun Gupta of the Industrial Manufacturing Engineering (IME) Department has been involved with FRC since it began and has mentored Team 1677 Quantum Ninjas team since 2005. Students competing are from area high schools including Kalamazoo Central, Loy Norrix, Gull Lake High School, Portage Northern, and Portage Central & KAMSC.

Upcoming Events

- BTR Bike Race July 14th
- Sunseeker Cross Country Solar Race July 14-17
Spring 2012 Tau Alpha Pi Induction Ceremony

Seven engineering technology students were inducted into the Delta Michigan Chapter of Tau Alpha Pi the national honor society in a formal ceremony recently. The ceremony held at the Bernhard Center, included a ritual of oath, awarding of certificates, and a dinner for all those in attendance. Dr. Alamgir Choudhury and Dr. Sam Ramrattan, faculty advisers for Tau Alpha Pi and faculty members in the Department of Industrial and Manufacturing Engineering introduced the new members: Tony Bienz, Grant Miller, and Nicholas Miskovich, manufacturing engineering technology; Edward Cox and Andrew Dreikosen, engineering management technology; Eric Nederhoed, and Charles Washburn engineering graphics/design technology.

Also taking part in the official ceremony were Tau Alpha Pi members Nicholas Dixon, secretary; Jian He, vice president; and Michael E. Biro, president. Two of the inductees are also serving in official positions for the society. Dreikosen serves as secretary, and Miller serves as the events coordinator.

The Delta Michigan Chapter of Tau Alpha Pi was founded at Western Michigan University in 1993. The society recognizes the top 5% of an institution’s student body. The purpose of the society is to recognize and inspire scholarly excellence, fine character traits, and leadership qualities. The society rewards selected scholars for past achievements and accomplishments, while encouraging a lifetime of commitment to learning and scholarship. Currently there are over 85 chapters of the society nationally.

WMU SAE Chapter Wins World Congress Competition!

The Western Michigan University Society of Automotive Engineers (SAE) student chapter achieved a great accomplishment at the 2012 SAE World Congress competition recently. The team worked very hard on their overall display quality and presentation delivery, and the effort paid off with the first place award. The presentation was on the team’s interpretation of this year’s world congress and was titled “Get Connected”. Their commitment to the SAE student chapter was evident as the team had to balance this event with their academic obligations during finals week.

Financial support for the team was provided by the MAE department and the CEAS and materials for the exhibit were provided by Scot Conant. This event was a wonderful opportunity for the students to present the quality of our engineering programs at WMU.

Claudia M. Fajardo, Ph.D is the team’s faculty advisor and is an assistant professor in the MAE department.

L-R: Alan Meinecke, Alexandra Walcott, and Baxter Gill, the SAE team with the first place award.
Western Michigan University’s team took the championship spot this year at the national Human Assisted Green Energy Vehicle design competition sponsored by the Parker Hannifin Corporation. Formerly called the Chainless Challenge competition, the first event was held in Cleveland, OH in August 2005 and continued until 2008. The event was initiated again for the 2011-12 academic year by Parker Hannifin who is the world’s leading diversified manufacturer of motion control technologies and systems and they expanded the scope of the competition.

The Human Assisted Green Energy Vehicle design competition was held in Irvine, CA, in April. Engineering undergraduate and graduate students from twelve universities across the nation participated in the competition. The challenge was to design a hydraulic bicycle that can transfer a rider’s manual power to the driving wheel through the use of a hydraulic fluid rather than chain or other direct drive mechanism.

This year the team members were Brian DeYoung, Jian He, Ryan Kamm, Saleem Hinton, and faculty members are Dr. Alamgir Choudhury and Dr. Jorge Rodriguez all from the Department of Industrial and Manufacturing Engineering.

The WMU team was the overall winner this year based on the 10 categories below:

### Design performance based on:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 meter sprint race</td>
<td>3rd</td>
</tr>
<tr>
<td>Efficiency race</td>
<td>2nd</td>
</tr>
<tr>
<td>10.8 mile endurance race</td>
<td>1st</td>
</tr>
</tbody>
</table>

### Design quality categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingenuity &amp; Novelty</td>
<td>Best paper</td>
</tr>
<tr>
<td>Reliability &amp; Safety</td>
<td>Cost Analysis</td>
</tr>
<tr>
<td>Marketability</td>
<td>Manufacturability</td>
</tr>
</tbody>
</table>

This year Northwestern University, Purdue University, University of Illinois, and University of Minnesota four of the Big 10 universities participated. Other participants included Case Western Reserve University, Cal Poly, Illinois Institute of Technology, University of Akron, University of Cincinnati, and Murray State as well.

### Civil & Construction Engineering Professors Receive Research Award

**Development of Overtime Traffic Enforcement Performance Standards for Michigan**

**Principal Investigator:** Valerian Kwizigile, Ph. D., P.E.

**Co-P.I.:** Jun-Seok Oh, Ph. D., PTOE.

**Award Amount:** $60,000

To establish enforcement activity performance standards for the state of Michigan that will assist the OHSP in ranking performance of the agencies receiving funding and to determine which agencies provide the best return of investment (ROI). This will help the OHSP when making annual determination on grant funding. This research has three objectives:

- Developing appropriate productivity standard(s) for both mobile patrols and static (zone) enforcement methodologies.
- Establish productivity levels of law enforcement agencies receiving federal grant funds to conduct traffic enforcements.
- Provide a ranking of agencies based on their performances.
Seniors Show Off Their Projects at the 2012 Spring Senior Design Conference

Parkview lobby had a steady flow of attendees for the 50th Senior Engineering Design Conference.

Timothy Caputo, Ryan Rader, and Adam Leppek, and their project “Optimization of an Airboat Design”.

Human Assisted Green Energy Vehicle team: L-R: Jian He, Ryan Kamm, Brandon De Young, and Selim Hinton.

Concrete canoe team project “Pure Michigan”, L-R: Two members present were Thomas Strazanac & Kevin Stack.

L-R: John Polasek with Spring 2012 CCE "Best Project" award winners Hadi Nassar, Thomas Strazanac, Courtney Rousseau, Kevin Stack, and Dr. Haluk Aktan.

Mitchel Hann, Cody Herring, Mitchell Bigelow, and faculty advisor Ralph Tanner. The “Plug-in Hybrid Electric Vehicle Heater Control System” project was done for Dr. John Patten and funded by the Denso Foundation.