

## Department of Mechanical Engineering—Engineering Mechanics



Greetings from William (Bill) W. Predebon, Chair, Department of Mechanical Engineering-Engineering Mechanics. For the latest news and information about our faculty, students, and staff please visit our web site at <http://www.me.mtu.edu/>.

### Upcoming Events



The Department of Mechanical Engineering - Engineering Mechanics invites you to join in the celebration of its 85th year of delivering a world class mechanical engineering education to its students. The Department will host a variety of activities throughout the year. The schedule of activities for 2012 Reunion are:

#### Thursday, August 2<sup>nd</sup>

- **12:30 p.m. - 3:30 p.m.** – Afternoon cruise down the Portage Canal on the Ranger III. Board at the National Park Service dock east of the Dee Stadium, right behind the Franklin Square Inn. We depart at 1:00 p.m. and will return at 3:30 p.m. (plenty of time to attend the Pasty Picnic). Space is limited and reservations are required so RSVP as soon as possible to [kagoulet@mtu.edu](mailto:kagoulet@mtu.edu) or phone (906) 487-2551. Refreshments and the cruise are compliments of the ME-EM Department.
- **4:00 and 5:00 p.m.** – Tours of the Mobile Lab; learn about the innovations in Hybrid Electric Vehicle & Microgrid education, research, and outreach at Michigan Tech. On campus behind the Memorial Union Building near the loading dock.



#### Friday, August 3<sup>rd</sup> – activities in the ME-EM building.

- **1:30 p.m.** – tour of selected ME-EM research labs
- **2:15 p.m.** – Test your knowledge – competition by the decade. Compete with others in your decade against other decades to win prizes.
- **2:15 p.m.** - Record your most memorable engineering story
- Refreshments will be served



The 2012 Reunion will be the first ever to celebrate the women of Michigan Tech. All female graduates, former students, faculty and staff are invited to a number of special events during Reunion including a Saturday evening “Girls Night Out” party hosted by the Presidential Council of Alumnae. Visit [www.mtu.edu/reunion](http://www.mtu.edu/reunion) for more details.

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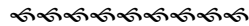
### The Academy of Mechanical Engineering and Engineering Mechanics Induction

On Saturday, April 7, 2012, the Department of Mechanical Engineering - Engineering Mechanics inducted four into the Mechanical Engineering and Engineering Mechanics' Academy. The purpose of the Academy is to honor outstanding graduates of the Michigan Technological University Department of Mechanical Engineering – Engineering Mechanics. Selection into the Academy recognizes excellence and leadership in engineering and civic affairs. This induction honors some of the most successful mechanical and engineering mechanics alumni of Michigan Tech. Academy members serve as inspirational role models for future mechanical engineering and engineering mechanics students. The following were inducted:

**Timothy Coffield (BSME '84)** is currently Vice President for Product Development at Illinois Tool Works Inc. in Rockford, MI.



After graduating from Michigan Tech, Tim went to work as a research engineer for 5 years at IBM Research in Rochester, MN. Following that he was the principal engineer & business group manager at Cacade Engineering for seven years. In 1998, he founded Dahti Technologies out of his house, which established itself as a leader in the seating industry. Dahti seating has worked mostly in the office-chair environment, but is developing in recreation, automotive, juvenile, marine, stadium, mass transit and other applications. In 2006 Dahti was purchased by Illinois Tool Works Inc. In 2008, he invented a unique orienting process allowing for the use of elastomer in demanding applications. He is inventor or co-inventor of over 80 US & foreign patents. His inventions are primarily in the area of manufacturing processes, plastics, and design innovations. In 1987, while working as an IBM Research & Development engineer, he co-invented IBM's advanced suspension system which became an industry standard disk drive design. In 1992, he invented the elastomeric encapsulation manufacturing process for Herman Miller's famous Aeron Chair. He also co-developed an award winning bicycle seat that was highlighted in a Time Magazine annual design issue. He is the creator of the MAP™ innovation process (a practical innovation approach that has produced a 15 year track record of innovative product commercialization) and often speaks on the innovation process. Tim is a member of the Product Development and Management Association and the Phi Tau Sigma Honor Society, Grand Rapids Inventor Network. He has authored technical papers on seating and ergonomics. He has been a featured speaker and panelist in a number of technology, industry, and academic forums. While a student at Michigan Tech, Tim was a ski coach for the Ski Club. Tim resides in Grand Rapids, MI.




**Colleen L. Jones-Cervantes (BSME '83)** is Vice President for Product Supply & Trading for Chevron with global responsibility for the supply of non-crude oil feed stocks to Chevron's refining system, refined products supply and trading, marine fuels marketing, and biofuels supply and trading. Her organization operates from four trading hubs in London, Singapore, U.S. Gulf Coast and U.S. West Coast, providing coverage to all of Chevron's downstream geography. After graduation Colleen started working at Chevron and has spent her career there in positions of increasing responsibility. In 1992 she was General Manager, Retail West, North America marketing, and was responsible for gasoline marketing and retail sales at nearly 3,000 Chevron and Texaco-branded stations in nine western continental states and Hawaii and spent two years in Hawaii. She was also General Manager of Company Owned Stores and President of Chevron Stations, Inc. In the mid-90's she was based in the Philippines where she spent nearly two years as a District Sales Manager with Caltex Philippines, Inc. Prior to her current position she was Vice President, Global Marketing, Asia Pacific region, where she led retail sales and operations for the Caltex brand, commercial and industrial fuel sales, terminal operations, marketing logistics and asphalt operations throughout an 11-country area. While in Asia she also served on the Board of Directors for Caltex Australia Ltd, the largest refining and marketing company in Australia. In addition to delivering business results, Colleen has a keen interest and passion for developing young professionals. She spends a great deal of time mentoring employees new to Chevron. She is actively involved with employee networks and serves on the Advisory Board for the Hispanic employee network, and is a frequent speaker at the Women's network events. During her time in Asia, Colleen supported "Caring for Cambodia"; a charity focused on improving education and providing basic needs for school age children around Siem Reap, Cambodia. Colleen was inducted into the Michigan Tech Presidential Council of Alumnae in 2011 and will join the MEEM External Advisory Board. While a student at Michigan Tech, Colleen was a founding member of the Beta Xi chapter, Alpha Sigma Tau sorority. She served as Vice-President and President of the sorority. Colleen was a member of the Blue Key National Honor Society. Colleen resides in Spring, Texas with her husband Winston and their two daughters, Kyndra and Lauren.




Colleen was inducted into the Michigan Tech Presidential Council of Alumnae in 2011 and will join the MEEM External Advisory Board. While a student at Michigan Tech, Colleen was a founding member of the Beta Xi chapter, Alpha Sigma Tau sorority. She served as Vice-President and President of the sorority. Colleen was a member of the Blue Key National Honor Society. Colleen resides in Spring, Texas with her husband Winston and their two daughters, Kyndra and Lauren.

## Academy of Mechanical Engineering and Engineering Mechanics (continued)



**Anthony F. Raimondo (BSME '62)** is Chairman & CEO of Behlen Manufacturing Company. Behlen Manufacturing Co. is a manufacturer of pre-fabricated buildings, grain bins, silos, and other structures, and is headquartered in Columbus, NE. After graduation, Tony joined General Motors 1962. Following management training and production supervisory experience at GM, Tony joined Moog, Inc., an aerospace company. He progressed from a Manufacturing Engineer to Quality Assurance Manager to Manufacturing Manager of this unique, people-oriented company that made the list of one of the best 100 companies to work for. He spent several years at the Sperry Corporation as General Manager of Vickers, a \$90 million hydraulic products manufacturing operation in Omaha, Nebraska. He joined Wickes Corporation in 1982 as General Manager. He led the efforts to complete a successful management buy-out of Behlen Manufacturing Company in 1984 at a time when Behlen experienced major losses due to market changes, and Wickes emerged from Chapter 11. Tony has held a number of political appointments: an appointment by the governor of Nebraska to chair the Nebraska Economic Development Commission from 1994-2003, member of the Nebraska Department of Labor Unemployment Insurance Advisory Council from 1995 – 2006, chairman of the Department of Labor Workers Training Board from 1996 – 2006, and director of the Nebraska Industrial Competitive Alliance and its chairman from 1996-2003. In March, 2004, Tony was selected as President Bush's nominee of Assistant Secretary of Commerce for manufacturing and Services (manufacturing czar), a new position in the Administration created to address the ailing factory sector. He subsequently withdrew due to presidential politics. He also ran for U.S. Senate in 2008 but lost in the Democratic primary. He has served on the Board of Directors of the Omaha Branch of the Federal Reserve Bank of Kansas City from 1999-2004 (chaired in 2004), the Nebraska Diplomats (president 1994), and the Columbus, Nebraska YMCA and Capital Foundation co-chair. He served on Teammates, a state advisory board, was chairman of the NE Advanced Manufacturing Coalition in 2006, was a member of the National Association of Manufacturers U.S. – China Task Force, and is a member of the University of Nebraska Medical Center Board of Councilors. He currently serves as a policy board member at Peter Kiewit Institute, University of Nebraska. His awards include Behlen ranked 74th in the Top 100 training awards by Training Magazine in 2002, the Distinguished Leadership Award from the Nebraska Workforce Development in 2001, elected to the Nebraska Business Hall of Fame in 1994, and named Turnaround Entrepreneur of the Year by National Winner Inc. Magazine in 1994. Tony currently lives in Columbus, NE and Bradenton FL with his wife Jeanne. The Raimondo's have 4 children, Phil, Tony Jr., Linda, and Diana.

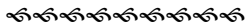



**Donald G. Wheatley (BSME '62, MSEM '63)** is retired from his last position as President of Extang Corp. After graduation from Michigan Tech, Don went to work for General Motors in 1963. He worked on the guidance systems doing vibration and fatigue analysis for the Apollo project. Out of the 60 new graduates on the project, he was the only one remaining at the end of the project. He also did some work on the main battle tank. He then accepted an unsolicited offer from Ford in 1965 and was there until 1996. At Ford he worked in a small team to define the new Ford Maverick and later led the team that designed and developed the Ford Bronco. In 1982 he invested \$350 to start a business in his basement with his son making clear and tinted Euro-Lens line headlight covers (thermo-formed) for trucks and cars to protect the bulb and for looks. He sold that business in 1984 when he founded and became President of Extang Corp, making Extang's famous "No Damage, No Drilling, Clamp-On Aluminum Frame " truck bed cover systems, a tonneau cover. Extang was the first to sell this truck accessory product nationwide. Extang grew to 128 employees with 3 plants and with sales of \$18-20 million. He sold Extang in 2007. Extang had built a 50 foot carbon fiber catamaran but they decided it was not financially viable and it was sold, although it continues to win races today. The resulting boat technology and patents launched Fortress Stabilization Systems which is owned by his son Edward. His daughter, Anne and her husband Dave then spun off a Wahoo composites/Wahoo Walls from Fortress. Wahoo builds custom carbon fiber beams for robots and has launched an energy saving wall system. While at the helm of his business, Don liked to hire young kids who had problems in their lives and give them the chance to turn their lives around. Don has over 53 patents as inventor or as co-inventor while at Ford Motor Co. and Extang. Extang Corp has more design patents than all other tonneau companies combined. Other awards include: the DaimlerChrysler Design Excellence Award for Product Application at the 1999 SEMA Show in Las Vegas for product design that adds to the quality and effectiveness of Dodge Trucks and Chrysler Vehicles, the Machine Design Award at Michigan Tech by the Industrial Press of New York City in 1962, and a Michigan Tech Fellowship in 1962. Don lives with his wife Patricia in Punta Gorda, FL. They have two children, Edward and Anne.

## Alumni and Friends News, Accomplishments, & Awards

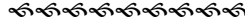
It is my intent to highlight alumni accomplishments on a regular basis. I would like to hear from you about your accomplishments and those of other Michigan Tech ME-EM alumni who have achieved recognition. Please email me this information at [wwpredeb@mtu.edu](mailto:wwpredeb@mtu.edu) or Kathy at [kagoulet@mtu.edu](mailto:kagoulet@mtu.edu).

**Steven Emmerich (BSME '88)** was awarded the Environmental Health Award from ASHRAE at the Society's 2012 Annual Conference in San Antonio, TX held June 23-27. The Award recognizes excellence in volunteer service focused on environmental health issues. Steve is a mechanical Engineer in the Indoor Air Quality and Ventilation Group of the Building Environment Division (BED) of the Engineering Laboratory (EL) at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD. .



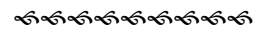
**Patrick E McCabe (BSME '06)** was noted in Crain's Detroit Business as one of the 2012 class of 20 in their 20's on April 2, 2012. This is the seventh year Crain's has highlighted the "brainpower and entrepreneurial talent of the region's young professionals and creatives." Selected by the editors and reporters at Crain's, Patrick was chosen from more than 300 nominees.

He is CEO and Co-founder of GreenLancer Energy Inc, located in Detroit MI. GreenLancer Energy is a startup with a Web-based model for cutting development and engineering costs in clean energy projects. GreenLancer Energy hit \$100K in revenue in the first six months of business with projected sales of \$2.1M this year. They plan to hire from six to 12 Web developers and IT employees in Detroit. Read the rest of the article at <http://www.craigslist.com/article/20120322/AWARDS20/120329954>



**Martha Sullivan (BSME '83)**, the president of Sensata Technologies, addressed more than 1,000 graduates during Michigan Tech's Spring Commencement on April 28, 2012. Martha was named president of Sensata in 2010, in addition to her role as chief operating officer and director of several of the company's subsidiaries. Previously she was executive vice president and chief operating officer, a position

she had held since Sensata was purchased by Texas Instruments in 2006. Sullivan is a member of the Presidential Council of Alumnae and the Academy of Mechanical Engineering and Engineering Mechanics at Michigan Tech and serves on the University's Generations of Discovery Capital Campaign.



General Motors, under the direction of **Dr. Terry Woychowski (BSME '78)** has involved Michigan Tech's Senior Design (SD) program in the Achilles Freedom Team of Wounded Veterans. When asked for advice on the design issues with the handbikes that GM was providing for wounded veterans, Terry suggested involving the Michigan Tech SD program by sponsoring a project through them to address and correct the design issues. Read the article at: <http://www.mtu.edu/news/stories/2012/june/story70106.html>

## Department Accomplishments

**The Michigan Tech Mobile Lab** traveled to Marquette MI on March 24, 2012 where Senator Carl Levin



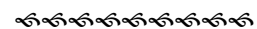
was given a presentation and demonstration. The Mobile Lab is a hybrid electric vehicle and microgrid education, research, and outreach platform.

Similar presentations were given on April 23, 2012 in Washington, D.C. And on May 1—3, 2012 in the Detroit, MI area. The Washington, D.C. presentation and demonstration was given at the Capital to officials at DoD, DoE, and the Dept. of Education. Three presentations and demonstrations were given over a 3 hour period with 30 officials participating.

Visitors to the mobile lab got to fabricate and test batteries made from common household items, ride a specially designed stationary bike that turns your legs into a simulation of a hybrid electric engine, and literally see a car engine run. Its cylinders are made of transparent quartz, so you can see the pistons moving up and down and the flames produced by combustion. The other presentations were at:

- The May 1st—to the U.S. Army Tank Automotive Research Development and Engineering Center (TARDEC) in Warren MI. The presentation was given to the Interim TARDEC Director and other leaders and was open for all TARDEC employees to tour.
- May 2nd—Chrysler Corp., Auburn Hills MI, open for all Chrysler employees
- May 3rd—the High School Enterprise Showcase at the Renaissance Center in Detroit, this stop was sponsored by Gen-

eral Motors along with Michigan Tech and was open to high school students from across the state. The lab was funded by a \$3 million US Department of Energy grant and \$750,000 of in-kind contributions from automotive industry sponsor and partners, the mobile lab takes hybrid electric vehicle education--the cutting edge of automotive engineering--right to working and displaced engineers, company employees, students and communities. The April 23rd appearance at was highlighted on Washington DC's ABC 13, WJRT TV. . Read the articles and watch the newscast at: <http://www.abc12.com/story/17698743/engineering-students-show-off-hybrid-technology-in-washington> and <http://www.mtu.edu/news/stories/2012/april/story67042.html>



Michigan Tech's Department of Mechanical Engineering - Engineering Mechanics was the first and remains the only

**Department Accomplishments Con't.**

mechanical engineering program in the Peace Corps Master's International (PCMI) program. With 31 PCMI graduate students across several academic department programs currently serving as Peace Corps volunteers, Michigan Tech is ranked first in the 2012 rankings of Peace Corps' Master's International and Paul D. Coverdell Fellows graduate schools for the 7th consecutive year. Read the article at: [http://www.admin.mtu.edu/urel/ttoday/previous.php?is-sue=20120412&utm\\_source=email&utm\\_content=20120412](http://www.admin.mtu.edu/urel/ttoday/previous.php?is-sue=20120412&utm_source=email&utm_content=20120412).

**Faculty and Student Invention Disclosures**

An invention disclosure, "Accessible Light Fixture Accessory (ALFA)" was submitted by the following ME seniors: **James (Vance) Maercklein, Jeffrey Squire, Abdulrahman Blaisi, and Su Ting Lau.** Their advisor is **Dr. William J. Endres (associate professor, MEEM).** The team was sponsored by Greg Storm.

**John Hill (assistant professor, ME-EM),** Colin Brooks (research scientist, MTRI), John Diebel (assistant director Tech Commercialization), Kevin Endsley (assistant research scientist, MTRI), Tyler Erickson (sr. research scientist, MTRI), Benjamin Koziol (research scientist, MTRI) and Gregory Leonard (business & operations director, MTRI) filed the invention disclosure,

"Routing Algorithm for weather-related crash risk aversion".

An invention disclosure, "Cost Optimized Prosthetic Knee Joint" was submitted by Michigan Tech seniors Elizabeth Dancy (Biomedical), **Laura Maciosek (ME), Kelsy Ryskamp (Biomedical),** (Senior Design Team 102), Their advisor is **Dr. Gregory Odegard (associate professor, MEEM).** The team sponsor is Dr. Rajesh Malhotra, All India Institute of Medical Sciences.

**Gordon Parker (professor, ME-EM), Christopher Hughes (sr., ME-EM), Ronald Kaunisto (sr., ME-EM), Alex Kaidan (sr., ME-EM), Lucas Lund (sr., ME-EM),** Michael Morley (Manager Tech Commercialization) have filed an invention disclosure, "DEF return flow distribution for thawing".

**Current Contracts and Grants**

**Ezra Bar-Ziv (Co-PI, ME-EM)** and J. Diebel (PI, Innovation and Industry Engagement), "Compaction of Biocoal", sponsor: University of Michigan - MIIE, total project amount: \$87,920.

**Bo Chen (PI, ME-EM)** and **Jeffrey Naber (Co-PI, ME-EM),** "Continued Engine Re-

search – Summer 2012", sponsor: Nostrum Energy, LLC, total project amount: \$48,070.

**Seong-Young Lee (PI, ME-EM) and Jacyln Johnson (Co-PI, ME-EM),** "Characterization of Water Spray Injection at Elevated Temperatures", sponsor: Nostrum Energy, LLC, total project amount: \$28,900.

**Scott Miers (PI, ME-EM),** "Marine Engines Fuelled with Gasoline/Alcohol Blends",

sponsor: Argonne National Lab, total project amount: \$16,445.

**Scott Miers (PI, ME-EM),** "Advanced Vehicle Characterization", sponsor: Argonne National Lab, total project amount: \$78,043.

**Dr. Nina Mahmoudian (assistant professor, ME-EM)** was the recipients of a Research Excellence Research Seed Grant Award.

**Faculty/Staff Awards/Accomplishments**

**Dr. Jeffrey Allen (associate professor, ME-EM)** had his research in fuel cells highlighted in Michigan Tech News. His team's research is nearing the development of a mathematical model that will slash R&D time and effort to develop a system for a reliable, marketable hydrogen fuel cell. Read the article at: <http://www.mtu.edu/news/stories/2012/april/story66279.html>

On Wednesday, May 9th, **Michael La-Court (research engineer, ME-EM)** was honored by the University for 35 years of service.

**Dr. Reza Shahbazian Yassar (associate professor, ME-EM)** was quoted as an expert in nanomaterials in the article "Cotton t-shirt to charge mobile phones?" published on the ABC Science website about transforming a cotton t-shirt into a component capable of charging devices. Read the article at: <http://www.abc.net.au/science/articles/2012/05/28/3512771.htm>

**Jeremy Worm (Research Engineer, ME-EM)** was quoted in the Wall Street Journal's "Money Watch" regarding an \$80,000 software gift for the Advanced Power System Research Center's mobile lab. Read the article at: [http://www.marketwatch.com/story/wineman-technology-donation-to-michigan-tech-](http://www.marketwatch.com/story/wineman-technology-donation-to-michigan-tech-further-hybrid-vehicle-development-2012-06-04)

[further-hybrid-vehicle-development-2012-06-04.](http://www.abc.net.au/science/articles/2012/05/28/3512771.htm)

**Faculty Promotion**



On April 27, 2012, the Michigan Tech Board of Control approved **Dr. Reza Shahbazian-Yassar's** promotion from assistant professor to associate professor with tenure. His research interests are nanoscale properties of advanced materials for energy nanosystems, nanoelectronics, and biomedical implants. See Dr. Shahbazian-Yassar's web page at: <http://www.me.mtu.edu/~reza/>

# CAPSTONE

# OR R N Z E R

**How is your To-Do list looking?  
Are you keeping up?  
NO???**

Well, here is a way to go after that #5 or #6 to-do item on your whiteboard, while you're tending to those new fires constantly being added to the top of your list.

Just this past year our Capstone students delivered new product designs, product validation test rigs, and/or process improvements to Ten Fortune-500 corporations, two small companies, and one individual entrepreneur.

Want in on the action?

Michigan Tech's Capstone Design Program is **actively looking for industry customers** who would like to engage teams of talented, skilled, and highly motivated students to knock those to-do items off your list. Our next group of projects will begin September 4, 2012 . If you would like to be a part of this Capstone Experience, benefit from the value of interacting with some of the nation's most promising engineers, and support the continuation of this top nationally ranked program, please contact us!

**Bob De Jonge**  
906.487.2142  
rdejonge@mtu.edu



## Student Accomplishments and Awards

ME-EM PhD students, **Mark Hopkins and Brennan Tymrak**, were two of the four graduate students to be awarded graduate research fellowships from the National Science Foundation. The fellowships consist of \$30,000 annual stipends for three years, international research and professional development opportunities, and supercomputer access. Mark's advisor is **Dr. L. Brad King (professor, ME-EM)** and Brennan's are **Dr. Michele Miller (associate professor, ME-EM)** and **Dr. John Gershenson (professor, ME-EM)**. ME-EM students who received honorable mention are **Bryan Plunger and Byrel Mitchell (PhD students)** and **Evan Lucas (MS student)**. Bryan's advisors are **Dr. C K Choi assistant professor, ME-EM** and **Dr. Charles Margraves (senior lecturer, ME-EM)**, Byrel's is **Dr. Nina Mahmoudian (assistant professor, ME-**

**EM)**, and Evan's is **Dr. Jason Blough (associate professor, ME-EM)**.



**Michael Hojnacki (sr., ME\_EM)** was awarded a Commissioner's Award from the Great Lakes Intercollegiate Athletic Conference (GLIAC). He finished his career with 1,288 points, 15th most in Michigan Tech history. He earned Academic All-District IV Honors twice and All-GLIAC North Division Second Team accolades. He was named the team's top newcomer his freshman season and the team's most valuable player as a sophomore. He earned GLIAC All-Academic Excellence honors three times and graduated with a 3.69 GPA in mechanical engineering.



**Alex MacLeod (sr., ME-EM)** was awarded the Michigan Tech hockey Harold Meese Sportsmanship Award.



**Jennifer M. Zarzecki (sr., ME-EM)** was elected secretary of the Executive Board of Undergraduate Student Government.



The 2012 Women of Promise Selections for ME-EM are: **Alicia Walby (undergraduate)** and **Kristina Lawyer (graduate)**. The Women of Promise program recognizes current female Michigan Tech students who go above and beyond what is expected of them in terms of being a well-rounded student - one who has demonstrated academic achievement, campus and community leadership, good citizenship, creativity, and other characteristics of high achieving individuals.



**Nathan Saliga (sr., ME-EM)** broke the Michigan Tech (and his own) school record in the 400-meter hurdles to finish fourth in a time of 54.27 at the Grand Valley State University Last Chance Meet Saturday, May 12, 2012.

## Undergraduate Expo 2012

The 12th annual **Undergraduate Expo** took place on Thursday, April 12, 2012 in Michigan Tech's Memorial Union Building. Student teams from Michigan Tech Enterprise and Senior Design programs present their projects at this event. Over 100 projects were on display. Read about it at: <http://www.expo.mtu.edu/awards.html>.

### Senior Design finalists:

Team 110 "Jaipur Foot Improvement" received second place in the Image contest and an Honorable Mention in the Senior Design category. The team members are seniors **Victoria Demers, Paul Sturmer, Robert Strobel and Marcel Kerkove (ME)**, Allison Lebovsky (ME/Biomedical Engineering), and Stefanie Bass (Biomedical Engineering). The team's advisors are **Dr. Gregory Odegard (associate professor, MEEM)** and Dr. Anil Jain (Jaipur, India).

**Alicia Steele (sr., ME/MSE)** is a member of the Economic Recovery of Alloying Elements from Grinding Swarf team that placed second in the Senior Design category. The team's advisor is Dr. Jaroslaw Drelich (associate profes-

sor, MSE). The team is sponsored by the Casting Services Group of ThyssenKrupp.

**Lynn Giesler (sr., ME/Biomedical Engineering)** is a member of the Noise Monitoring Device team that placed third in the Senior Design category. The team's advisor is Dr. Keat Ghee Ong (associate professor, Biomedical Engineering). The team is sponsored by the Portage Health Systems.

Team 150 "Assault Climbing Device" received an Honorable Mention. The team members are seniors **Nick Charters, Alex Cotton, Jeff Kangas, Adam Reich, and Collin Veele (ME)**. Their advisor is **Dr. Adam Loukus (instructor, MEEM)**. They were sponsored by the Air Force Office of Scientific Research.

Team 149 "Electric DEF Tank Header Heater" received an Honorable Mention. The team members are seniors **Lukas Lund, Alex Kaidan, and Chris Hughes (ME) and Ron Kaunisto (ME/Civil Engineering)**. The team's advisor is **Dr. Gordon Parker (professor, MEEM)**. The team sponsor is John Deere.

Team 102, "Cost-Optimized Prosthetic Knee Joint" received an Honorable Mention. The team members are seniors **Matthew Goldsworthy, Aram**

**Kim, Laura Maciosek and Anna Miller (ME), Kelsy Ryskamp (ME/Biomedical Engineering)**, and Elizabeth Anne Dancy (Biomedical Engineering). The team's advisor is **Dr. Gregory Odegard (associate professor, MEEM)**. The team sponsor is Dr. Rajesh Malhotra, All India Institute of Medical Sciences.

### Enterprise finalists:

Velovation, Enterprise Team 212, received first place in the Image contest. The team leader is **David Kravis (sr. ME)**. Their advisor is **Dr. John Gershenson (professor, MEEM)**.

The Blizzard Baja Enterprise team placed second. The senior MEEM team leaders are **Joseph DeHaan, Andrew Glaeser, Brett Schulte and Matt Rebandt**. Their advisor was Brett Hamlin (senior lecturer, Engineering Fundamentals).

In the new category, Patents and Future Innovators the Best Technical Specification Award was given to **Oskar Strojny (jr., ME), Jake Simula (fr., ME)** and Bryan Turner (sr., MSE) for the Magnetically Damped Suspended Isolation System. The students are members of the Nanotech Innovations Enterprise team. Their advisor is Dr. John Jaszczak (professor, Physics).

## Student Competitions and Team Awards

The Michigan Tech SAE Baja team was highlighted in the Houghton Daily Mining Gazette on June 13th. The team placed eighth out of 97 teams at the MGA test facilities in Burlington, WI. Dr. Brett Hamlin (sr. lecturer/Asst Dept Chair, Engineering Fundamentals) is the team's advisor. Read the article at: <http://www.mininggazette.com/page/content.detail/id/525748/Tech-Baja-team-shines-in-the-mud.html>



Michigan Tech is the only ASME Chapter to have a **Women in American Society of**

**Mechanical Engineers (WASME)** group affiliated with them. Organized in the fall of 2011, the group is ad-

vised by **Denise Jarvey (Sr. Engineering Academic Advisor, ME-EM)**. Denise and nine students traveled to Waterloo, IA to visit the John Deere Power Systems (JDPS) March 1 - 3, 2012. The trip was organized on the JDPS side by **Sue Illax (BSME '77)**. Also participating in the visit were ME-EM alumnus **Kirby Baumgard (ME-EM PhD '95), Blake Metz (BSME '07), and Heidi Kenkel (BSME '96)**. Read the article at: <http://viewer.zmags.com/publication/e8e9dcae#e8e9dcae/2>



The following ME students were recognized by the Michigan Tech ROTC program:

### Army ROTC:

- **David Brown-Strange (sr.)** - Bronze Medal Athlete
- **Timothy Rogers (fr.)** - Most Improved Physical Training Award, Marksmanship Badge, Cadet Scholar, & Silver Medal Athlete
- **Reid Barber (sr.)** - Cadet Scholar & Gold Medal Athlete
- **Luke Grossman (soph.)** - Platinum Medal Athlete, Marksmanship Badge, Cadet Honors, & Military Order of the World Wars
- **Spencer Hill (soph.)** - Platinum Medal Athlete & Cadet Honors
- **Shawn Matuszewski (jr.)** - Platinum Medal Athlete, Marksmanship Badge, Cadet Scholar & Cadet of the Semester



**ROTC Awards Continued**

- **Andrew Holmes (so.)** - Marksmanship Badge
- **Taylor Driscoll (so.)** - Marksmanship Badge
- **Eric Labelle (so.)** - Marksmanship Badge
- **Alex Tuomi (sr.)** - Veteran of Foreign Wars Medal

**Air Force ROTC:**

- **Andrew C. Buday (sr.)** - Commendation Award (fall 2011) and Achievement Award (spring 2012), & Warrior Spirit Ribbon
- **Dylan R. Penn (sr.)** - The American Legion Award for General Military Excellence & Meritorious Service Award

- (fall 2011)
- **Jacob A. LaSarge (sr.)** - Commendation Award (fall 2011)
- **Jon M. Knutson (sr.)** - Military Order of World Wars Award & Achievement Award (fall 2011)
- **Michael R. Leveille (sr.)** - Meritorious Service Award (fall 2011)
- **Nathan A. Mazurowski (so.)** - The American Legion Award for General Military Excellence, Achievement Award (spring 2012), & College Scholarship
- **Nathan R. Ralph (sr.)** - Commendation Award (fall 2011)
- **Samuel A. McKay (fr.)** - Achievement Award (fall 2011) & College Scholarship

- **Sophia M. Rizzo (so.)** - Veterans of Foreign Award, Achievement Award (fall 2011), & Warrior Spirit Ribbon
- **Timothy K. Cencer (sr.)** - Reserve Officers Association Award & Commendation Award (fall 2011)
- **Trevor R. Birr (jr.)** - Reserve Officers Association Award & Achievement Award (spring 2012)
- **Tylor C. Rathsack (sr.)** The American Legion Award for Scholastic Excellence, Scottish Rite Southern Jurisdiction Award, Commendation Award (spring 2012), & Achievement Award (fall 2011)
- **Wesley D. Woodhouse (sr.)** - Air Force Association Award, Meritorious Service Award (fall 2011), Commendation Award (fall 2011)



**University News/Awards**

In March, Michigan Tech hosted a Quality Checkup Visit by two evaluators representing the Higher Learning Commission (HLC). President Glenn Mroz has received the Quality Checkup report, which states that Michigan Tech continues to meet all five criteria for accreditation, as well as Federal Compliance Requirements, and that Michigan Tech demonstrates an organizational commitment to systematic quality improvement.

Michigan Tech students, with support from General Motors, Upper Peninsula Power Company, and the City of Houghton, have partnered to install the first electric vehicle (EV) charging station in the UP available for public use on the Houghton parking deck. Student teams in the Automotive Computing Enterprise, Transportation Enterprise, Civil Engineering Senior Design, and the School of Business participated in the venture. Initially, the Houghton station will offer free charging.

A photo of the Mind Trekkers' ooblek demo was featured in the March-April 2012 issue of the Washington Flyer magazine, published by the Metropolitan Washington (DC) Airports Authority. The Mind Trekkers presented their science magic show at the 2nd USA Science and Engineering Festival in Washington, April 28-29. Watch the video at: <http://www.youtube.com/watch?v=TudhygHVJ6k>. The group was also featured on May 6, 2012, in the Sault Sainte Marie Evening News featured the Michigan Tech Mind Trekkers' science and engineering road show. Read the article at: <http://www.sooeveningnews.com/news/x1260492818/A-hair-raising-experience>.

Eight members of Michigan Tech's chapter of the National Society of Black Engineers (NSBE) went to Detroit to participate in an alternative spring break 2012 week. They conducted Family Engineering events at three schools. Read the article at: <http://wupcenter.mtu.edu/news/2012/detroit-family-engineering.html>.

Todd Stewart, Michigan Tech's Director of National Security and Strategic Initiatives since 2008, was sworn in on May 8 as director and chancellor of the Air Force Institute of Technology (AFIT).

The institute is located at Wright-Patterson Air Force Base in Ohio.

Michigan Tech's College of Engineering has a new dean. **Dr. William Worek**, professor and former head of the Department of Mechanical and Industrial Engineering at the University of Illinois at Chicago (UIC), has accepted the post effective July 1. In addition, Dr. Worek will serve as the Dave House Professor. His appointment includes tenure in the Department of Mechanical Engineering - Engineering Department at Michigan Tech.



**August 2, 3, & 4**  
**Do not forget!**  
**Join the fun!**  
 See Page 1 for the  
**Department of**  
**Mechanical Engineering—**  
**Engineering Mechanics**  
**Schedule of Events**