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12-2017

## ME-EM eNewsBrief, July-December 2017

Department of Mechanical Engineering-Engineering Mechanics, Michigan Technological University

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Department of Mechanical Engineering-Engineering Mechanics, Michigan Technological University (2017). ME-EM eNewsBrief, July-December 2017. 13(3 & 4)  
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# ME-EM

Michigan Tech eNewsBrief

Vol. 13 | Issues 3 & 4 | July-Dec 2017



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Greetings from William (Bill) Predebon, Chair, Department of Mechanical Engineering-Engineering Mechanics at Michigan Tech. For the latest news and info about our faculty, students and staff, please visit our website at [www.mtu.edu/mechanical](http://www.mtu.edu/mechanical). Visit us on Facebook, [MEEM](#).

### Upcoming Events

**The Great Lakes Invitational Hockey Tournament** will be held in Detroit at the Little Caesars Area on Monday and Tuesday, January 1 and 2, 2018. Connect with fellow Huskies in the 1701 Pub (upper concourse an hour prior to each Michigan Tech game. The MTU vs. MSU game starts on Monday at 2:30 p.m. Dr. Bill Predebon, ME-EM Department Chair, will be in attendance.

**ME Scholarship Winter Carnival Alumni Hockey Social** will be held on Saturday, February 10, 2018 during the Michigan Tech versus Bemidji State hockey game in the Husky Suite South Skybox of the John MacInnes Student Ice Arena. The game has a 5:07 PM start time. Tickets are \$30/person, which includes a \$15 donation to the ME-EM Alumni Scholarship Fund. Stadium food and refreshments are provided by the ME-EM department. Visit the [Registration link](#) for more information and to purchase tickets for this fun-filled event.

**SAE Clean Snowmobile Challenge** will be held March 5-10, 2018 at the Keweenaw Research Center. If you are interested in becoming a CSC 2018 sponsor, contact Jay Meldrum at 906-487-2750, or email [jmeldrum@mtu.edu](mailto:jmeldrum@mtu.edu).

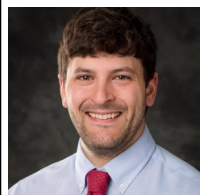
### Past Events - ME-EM Academy Induction Ceremony

On October 28th, the Academy of Mechanical Engineering and Engineering Mechanics inducted three new members: Thomas J. Bronz, Jr. (BSME '89) Christine R. Roberts (BSME '91), and Xintan Chang (Ph.D. '88). See the [full article](#).

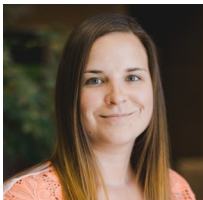


Shown in the picture from left to right are: Vice President Les Cook, Thomas J. Bronz, Jr., Christine R. Roberts, Xintan Chang, and ME-EM Department Chair William W. Predebon

### New Faculty and Staff



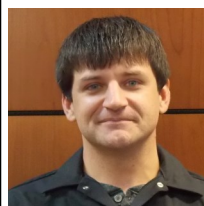
**William Atkinson** joined the ME-EM department as a Research Engineer to support the Optical Spray and Combustion Lab and the APS Labs. Bill received a BSME at MTU in 2010.



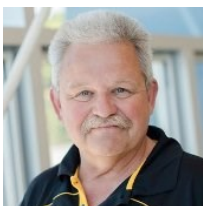
**Christina Fabian** joined the office staff this summer as an Administrative Aide. Christina received her B.S. in Elementary Education from the Univ. of Illinois -Urbana-Champaign.



**Anthony Pinar** is splitting his time between ECE and the APSRC. Dr. Pinar received his Ph.D. in Electrical Engineering at MTU in 2017.



**Joel Duncan** joined the department as a Research Associate to lend his fabrication/experimentation, and design and analysis skills to the APS Labs. Joel is currently pursuing an BSME at MTU.



**Guy Meadows** joined the ME-EM department as a Research Professor. Dr. Meadows is the Director of the Great Lakes Research Center. He received his Ph.D. in 1977 in Marine Sciences at Purdue University.



**Patricia Stein** joined the ME-EM department as a temporary Engineering Academic Advisor. Tricia earned her BSME at Michigan Tech University in 1987.



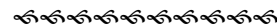
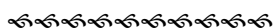
**Brian Eggart** joined the ME-EM department as a Research Engineer/Grant Writer to work with the small engine test cell in the APSRC building. Dr. Eggart completed his Ph.D. in Mechanical Engineering at MTU in 2007.



**Stephen Morse** joined the ME-EM department with a 1/3 Assistant Professor appointment, split with Civil & Environmental Engineering. Dr. Morse received his Ph.D. in Civil Eng from Texas Tech Univ in 2009, and was an Asst Prof there since 2011. Dr. Morse works in structural aspects of glass as a building element.



**Cindy Wadaga** joined the ME-EM department office staff as an Office Assistant. Cindy brings to the department many years of experience with bookkeeping, payroll and exceptional administrative support.



### ME-EM Department Chair Travel

When on travel for the Department, Dr. Predebon visits with alumni to get their feedback on our programs and their career and to give an update on the Department and the University. Please let the Department know if you would be available for a visit when he is in your area. Call 906-487-2911

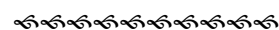
Dr. Predebon will be traveling to the following cities this winter:

- **Detroit, MI—January 1 to 4, 2018**—GLI Hockey Tournament
- **San Diego, CA—March 13-17, 2018**—ASME EM Leadership Summit
- **Detroit, MI—April 9-13, 2018**—SAE 2018 Congress at Cobo Hall

### Faculty and Staff

#### Awards & Accomplishments

**Dr. Nancy Barr**, Director of the ME-EM Engineering Communications Program, presented a paper at IEEE's Professional Communication Society annual conference in Madison. Read the Tech Today notice [here](#).



**Dr. CK Choi** (associate professor, ME-EM) was selected by the Vice President for Research Office to receive the Portage Health Foundation Mid-Career award, a 2017 REF award.



### (cont.) Faculty and Staff

#### Awards & Accomplishments

The Seattle Post-Intelligencer reported on the [winners](#) of the John Johnson Award for Outstanding Research in Diesel Engines. **Dr. John H. Johnson (Presidential Professor, ME-EM)**, is a renowned expert in the field of diesel engines.

Orbion Space Technology, a Houghton-based startup company co-founded by **Dr. Brad King**, won top prize at the Accelerate Michigan Innovation Competition of \$500,000. Articles can be found in [MiTechNews](#) & [Tech Today](#).

Research by **Dr. Brad King** and Ph.D student **Brandon Jackson** on spiky ferrofluids used to power nanosatellites appeared in a number science media outlets including the [Institution of Mechanical Engineers](#), [New Atlas](#), [Universe Today](#), [Phys.org](#), [Space Daily](#), [R&D Magazine](#) and numerous blog sites.

During the Women in Robotics Summer Youth Program, 23 girls built robots to help people. This camp was a collaborative effort with **Dr. Nina Mahmoudian** and **Dr. Mo Rastgaar**. View the Tech Today article [here](#).

**Dr. Nina Mahmoudian** (associate professor, ME-EM) and **Donna Fard** (PhD student, ME-EM) were selected to celebrate National Robotics Week by University Marketing and Communications. They [hosted a live lab tour](#) of the Nonlinear and Autonomous Systems Lab and discussed their research followed by students demonstrating robots they designed to better navigate an obstacle course in the lab.

**Dr. Hassan Masoud** became an associate editor of the European Journal of Computational Mechanics.

CBS News published an article on the potential for autonomous ships quoting **Dr. Guy Meadows**. Read the article [here](#).

**Dr. Guy Meadows** was selected to testify before the US Senate Committee on Commerce, Science and Transportation Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard on November 16th in Washington, DC. The topic of the hearing was "Coast Guard Readiness: How Far Can We Stretch our Nation's Only Multi-Mission Military Force?" Click link to read the full articles in [Tech Today](#), and in [Commerce](#).

At the Michigan Pipeline Safety Advisory Board (PSAB) quarterly meeting, **Dr. Guy Meadows** provided details on the progress of a team proposal for an independent risk analysis of the Straits pipeline. See the full news [story](#) and [update](#).

[MLive](#), [Detroit News](#) and [Associated Press](#) reported on the Michigan Pipeline Safety Advisory Board's vote to contract with Michigan Tech's Great Lakes Research Center and its director, **Dr. Guy Meadows**, to convene a panel of academic experts from around Michigan to develop a risk analysis for the dual pipeline that crosses underneath the Straits of Mackinac.

**Dr. Guy Meadows'** work with the National Oceanic and Atmospheric Administration (NOAA) on shipwrecks at the Thunder Bay National Marine Sanctuary was featured on Michigan Radio's "Stateside" program. See the full article [here](#).

The two historic shipwrecks that **Dr. Guy Meadows**, Chris Pinnow and Jamey Anderson helped discover in Lake Huron have been widely covered in Michigan news. This includes Michigan Radio, Detroit news stations, [UP Matters](#), [Tech Century](#) and [Marine Technology News](#).

**Dr. Scott Miers** (associate professor, ME-EM) was one of four Michigan Tech faculty members nominated for the Outstanding Faculty Award. The award is given by the Order of Omega, the Greek Life Honor Society. Fraternity and Sorority students nominate and vote on the candidates. The award recognizes faculty who are dedicated to supporting students and helping them succeed academically, demonstrate a passion for teaching and/or research, utilize innovative teaching methods, and promote academic integrity among students.

**Dr. Scott Miers** was the winner of the 2017 Distinguished Teaching Award in the professor/associate professor category. Read about it [here](#).

Smithsonian's Air & Space Magazine published a feature article about Michigan Tech's new NASA Space Research Institute, headed by **Dr. Greg Odegard** (ME-EM). The institute will work on using carbon nanotubes to create a composite that is lighter and stronger than any material used in load-bearing structures today. See [here](#).

**Dr. Mo Rastgaar's** "drone net" developed by the Michigan Tech Human-Interactive Robotics Lab was listed on the website TECHLI and on The Detroit News as a possible solution to stop contraband being dropped from drones into prisons. Read the full [TECHLI article](#), and/or the [Detroit News article](#).

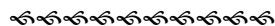
## (cont.) Faculty & Staff

### Awards and Accomplishments

Wired (UK) published an [article](#) about “space mining” for fuel resources on Mars quoting **Dr. Paul van Susante** on his research.

### Department Accomplishments

The Mechanical Engineering program rose to 18th in the nation in research expenditures. Read the [full story](#) on the Michigan Tech News website.



The Mechanical Engineering program was ranked #15 out of 269 nationwide, and #3 of 13 statewide. These rankings are based on average early-career earnings and average mid-career earnings from the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics, a branch of the Department of Education. View College Factual 2018 rankings for MTU [here](#).

Industry Week published a feature article on The Women in Automotive Engineering (WIAE) program this summer during the Michigan Tech Summer Youth Program where girls from all over the world participated.

**Chris Morgan, APSRC Operations Manager & Instructor and (BSME '08),**

**(MSME '11)** taught them about modern automotive technology at the Mobile Lab at the APSRC. See the full Tech Today [article](#).

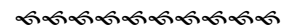


The College of Engineering ABET Accreditation visit was on October 22-24, 2017, and it went very well for all of the engineering programs. The ME Program received no shortcomings, however, the evaluation is not official until July 2018.



Dr. Ye “Sarah” Sun doing research with a student on the driving simulator in her Human Heptic Lab.

Michigan Tech’s **Advanced Power System Research Centers (APS Labs)**, formed a new partnership with auto industry leaders to work on mutually beneficial engine research projects. The partnership is titled the Advanced Light Duty Engine Consortium. Each of the three initial partners - General Motors, BorgWarner, and FCA- contributed \$50,000 to the consortium the first year, and plan to provide that support annually. Five projects were selected for year one involving Tech Students, whose research expertise impressed all involved. Read the [story](#) in the Michigan Tech News blog.



The Michigan Economic Development Corporation published a video that features Michigan Tech’s **APSRC and the mobile lab**. [View](#) “360 VR Video: The People of PlanetM | Self-driving Car Testing”. Students conduct research in a wide range of transportation industry areas, including autonomous technology and smart infrastructure. Advancements in these areas are crucial for vehicles to interact with the world around them in the future.



Coaches assist students with the ME core courses in the Lagina Family Student Success Center.

### Current Contracts and Grants

**Abadi, Parisa (PI, ME-EM);** “3-D Printed Nano-Bioactuators and their Application in Navigation of Endovascular Catheters”; sponsor: American Heart Association; total award: \$403,000.

**Barnard, Andrew (PI, ME-EM);** “I-Corps: Carbon Nanotube Coaxial noise Control”; sponsor: National Science Foundation; total award: \$56,700.

**Barnard, Andrew (PI, ME-EM),** Thompson, J. (Co-PI, Pavlis Honor College); “Enterprise: Chairless Chair Technology for Military Ground Vehicles”; sponsor: General Dynamics Land Systems (GDLS); total award: \$17,500.

**Johnson, Kevin (PI, ME-EM);** “Various Sponsors (MTS Testing)”; sponsor: Various sponsors; total award: \$300.

**Mahmoudian, Nina (PI, ME-EM);** “Magnetic Sensor Suite for Remotely Operated Vehicles for Littoral Threat Characterization in Complex Seabed Environments”; sponsor: Twinleaf, LLC; total award: \$50,466.

**Masoud, Hassan (PI, ME-EM);** “Collaborative Research: Individual and Collective Dynamics of Marangoni Surface Tension Effects Between Particles”; sponsor: National Science Foundation; total award: \$232,876.

**Morgan, Chris (PI, ME-EM),** Worm, Jeremy (Co-PI, ME-EM); “Delivery of Hands-On Professional Development Modules in Electrified Propulsion Systems”; sponsor: AVL Powertrain Engineering, Inc.; total award: \$15,199.

**Dr. Greg Odegard (PI, ME-EM)** is the principal investigator on a project that has received a \$1,000,000 research and development grant from the National Aeronautics and Space Administration (NASA). Ravi Pandey (Physics), Julia King (Chem Eng) and **Trisha Sain (ME-EM)** are Co-Pis on the project titled “Institute for Ultra-Strong Composites by Computational Design (US-COMP).” This is the first year of a five-year project totaling \$14,999,995.

**Parker, Gordon G. (PI, ME-EM),** Goldsmith, Steven (Co-PI, ME-EM), Weaver, Wayne (Co-PI, ECE), Brown, Laura (Co-PI, CS); “Agent-Based Control of Agile Energy Networks”; sponsor: US Department of Defense, Army Research Lab; total award: \$150,000.

**Ra, YOUNCHUL (PI, ME-EM);** “Investigation on Enhancement of Combustion Performance and Efficiency in a Gasoline Engine with CVVD Technique”; sponsor: Hyundai Motor Co.; total award: \$160,000.

**Shahbakhti, Mahdi (PI, ME-EM),** Blough, Jason and Robinette, Darrell (Co-PIs, ME-EM); “Driveline Torque Modeling and Estimation for Anti Jerk Control”; sponsor: Ford Motor Company; total award: \$24,770.

**Sun, Ye. (PI, ME-EM),** Hu, Shiyan (Co-PI, ECE); “Understanding and Mitigating Artifacts in Wearable Electronics by Synergic Approaches”; sponsor: NSF; total award: \$330,504.

**Tajiri, Kazuya (PI, ME-EM);** “Technology Review for Li-ion and All Solid-State Battery Materials”; sponsor: Tosoh Corp.; total award: \$4,595.

**Worm, Jeremy (PI, ME-EM);** “Development and Delivery of a Professional Development Course in Inverter Design”; sponsor: US DoD, Army, TARDEC; total award: \$20,422.

Michigan Tech Winter Carnival Presents:

*“Myths and Tales of the Past  
In Our Frigid Forecast”*

February 8-11, 2018

Come join the fun.





## Student Competitions and Team Awards

Michigan Tech was one of 8 universities selected to participate in the SAE/GM AutoDrive Challenge. An announcement was made on Wednesday, April 5, 2017 at the SAE World Congress held in Detroit. Media carrying the story included [Michigan Tech News](#), [Detroit Business](#), [engadget](#), [Clean Technica](#) and [Hybrid Cars](#).

The Michigan Tech **Concrete Canoe** team took first place in the North Central regional competition held April 8 and 9 at Lawrence Technological University in Southfield, Michigan. The team consisted of 35 students enrolled in 8 different majors including Mechanical Engineering. See the [article](#).

**Nick Dubiel (sr.) ME-EM** and Morgan Crocker (Scientific and Technical Communications) took the \$30,000 first prize in the New Venture Competition, held in March at Central Michigan University. The competition was hosted by CMU and co-sponsored by the Innovation Center for Entrepreneurship in Michigan Tech's Pavlis Honors College. A total of 29 student teams, 24 from Central Michigan, four from Michigan Tech and one team with members from both schools competed for more than \$77,000 that was awarded to seven different teams. Read the [article](#) here.

**The SENSE (Strategic Education through Naval Systems Experiences) Enterprise** attended a two-day conference on new life-saving technologies for the Great Lakes in April in Sheboygan, WI. Their research on developing a drone to help save lives was highlighted in the Milwaukee Journal-Sentinel, the Detroit Free Press, and the Wisconsin Rapids Tribune. Their

advisors are **Dr. Andrew Barnard** (assistant professor), and **Dr. Nina Mahmoudian** (associate professor) ME-EM. Read the story [here](#).

Shadi Darani (PhD student) ME-EM, **Brandon Jackson** (PhD student) ME-EM, **Jacob Liimatta** (MS student) ME-EM, **Kaushik Prabu** (MS student) ME-EM, and **Shangyan Zou** (PhD student) ME-EM, along with students from the University of Michigan comprised one of sixty nine teams that participated in the European Space Agency's 9th Global Trajectory Optimization Competition, an online international competition. The team placed 16th in the competition. Their advisor is **Dr. Ossama Abdelkhalik** (associate professor) ME-EM. See the [article](#).

**The Velovations Enterprise—Multi Implement Snow Groomer team** was awarded \$2,250 from the GM's Enterprise Manufacturing Initiative to continue working on a snow-bike trail groomer for this coming school year. Their advisor is **Steve Lehmann** (research engineer) ME-EM.

## Student Accomplishments and Awards

Michigan Tech students won 11 awards at the joint SAE Noise and Vibration Conference and INCE-USA NoiseCon held on June 14, 2017 in Grand Rapids, MI. Their advisor is **Dr. Andrew Barnard** (assistant professor) ME-EM.

- ♦ **Troy Bouman** (PhD student) ME-EM, SAE NVC Best Student Paper First place.
- ♦ **Stephania Vaglica Beranek** (sr.) EBE, Gold Medal for Excellence in the Study of Noise Control Engineering for an Undergraduate Student.

- ♦ **Mahsa Asgarisabet** (PhD student) ME-EM, SAE NVC Best Student Paper Second Place, Beranek Pewter Medal for Excellence in the Study of Noise Control Engineering for a Graduate Student, and INCE-USA Hallberg Foundation Travel Award.
- ♦ **Micaela Theiry** (MS student) ME-EM, INCE-USA NoiseCon Best Student Paper and INCE-USA Hallberg Foundation Travel Award.
- ♦ **Trinoy Dutta** (MS student) ME-EM, INCE-USA NoiseCon Best Student Paper.
- ♦ **Miles Penhale** (PhD student) ME-EM, INCE-USA Hallberg Foundation Travel Award.
- ♦ **Siddharth Parmar** (MS student) ME-EM, INCE-USA Hallberg Foundation Travel Award.
- ♦ **Suraj Prabhu** (PhD student) ME-EM, INCE-USA Hallberg Foundation Travel Award

**Reid Sturos (sr.) ME-EM** received the Harold Meese Sportsmanship Award for his accomplishments in hockey this past season.

**David Walter (sr.) ME-EM** was one of three Huskies named to the 2017 NFF Hampshire Honor Society. The 2017 NFF Hampshire Honor Society is comprised of college football players from all divisions of play who each maintained a cumulative 3.2 GPA or better throughout their college careers.

**Cayman Berg-Morales (sr.) ME-EM** was nominated for the 2017 Allstate AFCA Good Works Team in July. View the [article](#).

### Student Accomplishments and Awards (cont.)

**Drew Hanover (sr.) ME-EM**, received third place honors in the Pavlis Honors College Research Symposium for his poster "Engineering for Building-to-Grid Predictive Power Flow Control for Demand Response and Demand Flexibility"

**Zachary Klassen (sr.) ME-EM** represented Michigan Tech track on this year's All-Midwest Region Team. He made the all-region team in the Decathlon.

**David Adamovicz (sr.), Adam Augustyniak (sr.), Raymond Coyle (jr.), Benjamin Hubbard (jr.), Jacob Richards (jr.), and Riley Stroven (sr.)** all of ME-EM were 6 of the nineteen 2017 inductees into Michigan Tech's Michigan Beta chapter of Tau Beta Pi in April. Tau Beta Pi is the engineering national honor society. Students who join are in the top eighth of their junior class or the top fifth of their senior class.

**Laura Schimmel (sr.) ME-EM** took her passion for service, a love of geese, and the knowledge she'd gained at Michigan Tech to prepare for the Peace Corps in the Peace Corps Prep program of the [Pavlis Honors College](#). Read the [full story](#) on the Michigan Tech News Website.

### Area News

The Alpena News reported on a National Oceanic & Atmospheric Administration (NOAA) research project conducted by Michigan Tech's Great Lakes Research Center in Lake Huron in the Thunder Bay Research Sanctuary. The GLRC used Iver-3, an underwater autonomous vehicle, to examine two shipwreck sites. See article [here](#).

**Tanner Kero**, son of our Senior Major Gift Officer **Dale Kero**, came home this summer to be an instructor at Tech's Hockey School. Tanner Kero is currently in his third season with the Chicago Blackhawks. Read article in [Tech Today](#).

### Alumni and Friends News, Accomplishments & Awards

**John Drake (BSME '64)** was selected to receive the Board of Control Silver Medal at the Alumni Reunion Awards Dinner on August 4. The award recognizes people who through personal and professional achievement, are outstanding examples to Michigan Tech's more recent graduates. Read the full article [here](#).

**Jeffrey Decker (BSME '09)** and his wife **Cara (Hanson) Decker (BS '10)** visited six continents and 23 countries, spending the past year on a grand tour of the planet. [Read](#) their story and view the beautiful photos of their travels in the Michigan Tech News blog.

**Pat Suhy (BSME '88)**, manager of Chevrolet's NASCAR Competition Group, was interviewed by The Daily Tribune about the unveiling of the new Chevy Camaro ZL1, Chevrolet's new NASCAR Cup race car. Read the Daily Tribune's interview with Pat [here](#).

**Eric Obermeyer (BSME '94), (MSME '97)** was promoted to Principal Manufacturing Engineer at InSink-Erator (Division of Emerson Electric Co.), effective October 2017. Eric is a licensed Professional Engineer in the state of Wisconsin. He began his ca-

reer as a Manufacturing Engineer for MarquipWardUnited (Phillips, Wisconsin), before transitioning to design engineering roles there and at Zenar Corporation (Oak Creek, Wisconsin). Eric started at InSink-Erator as a Senior Supplier Development Engineer in January 2011 and then moved to a Senior Manufacturing Engineer in October 2015.

Michigan Tech's thought leaders glimpse into the University's future. ME-EM alumna **Dr. Robin Johnson Cash, (PhD '17)** reflects on why STEM needs more people with new and different ideas. Read [full article](#) in Michigan Tech News. "Imagine Boundless Possibilities".

**Warren Johnson (BSME '42)**: U.S. Senator Jack Reed of Rhode Island presented World War II service medals to the family of ME alumnus and WWII Navy veteran Warren Johnson. Read the entire story in the Observer-Reporter [article](#).

### University News/Awards

The Michigan Tech Enterprise Program has been selected to receive the Donald N. Zweip Innovation in Education Award from the American Society of Mechanical Engineers (ASME). The award recognizes mechanical engineering/engineering technology and closely related programs/departments for exceptional and innovative engagement in and fostering advances in mechanical engineering education, particularly those who have demonstrated exemplary contributions to the advancement of mechanical and multidisciplinary project-based engineering education. Read about the [award](#).



### University News/Awards (cont.)

Michigan Tech was ranked 14th by CNBC of the 25 public colleges and universities that offer the highest return on investment (ROI), the expected 20-year earnings of graduates minus the cost of their education. The rankings, based on the latest data from Payscale.com, were reported by [Yahoo Finance](#) and other news outlets.

Student Loan Report (SLR), a website that tracks student loan and financial aid information, has ranked Michigan Tech 53rd among the 250 top public colleges and universities for the financial aid it offers students [SLR Rankings](#).

Michigan Tech received a grant from the [DENSO Foundation](#) to support hands-on learning programs.

WLUC TV6 reported on the Michigan Tech students who participated in "Make a Difference Day". Students participated in 55 service projects throughout the community. Read the full article [here](#).

Michigan Tech was ranked 110 nationally and third in the state as offering their students the best educational experiences by Business First. 499 public colleges and universities were ranked. Read the article [here](#).

Three Michigan Tech programs ranked in the top 50 of the National Science Foundation's (NSF) 2016 Higher Education Research and Development Survey rankings. The survey results are based on research expenditures by NSF-designated disciplines, some of which include academic departments, centers and institutes at Michigan Tech.

Forbes ranked Michigan Tech among the top 25 STEM colleges. Read the full [Forbes article](#).

[Forbes.com](#), ranks Michigan Tech 12th in the nation for public universities whose graduates earn the highest mid-career salaries. Read the [full story](#).

Wall Street Journal/Times Higher Education ranked Michigan Tech in the top 15% of colleges and universities nationwide. See the full article [here](#).

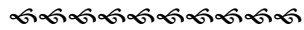
Money Magazine ranked Michigan Tech 6th in the nation in early career earnings. [Read](#) the full article.

Michigan Tech ranked #9 in the 2017 Safest College Campuses by Niche.com. See the full article [here](#).

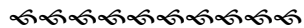


### University News and Awards

College Factual's 2018 Best Colleges report ranked Michigan Tech 3rd in Michigan and the top 20% nationwide. Read the full article [here](#).



Mi-STAR (Michigan Science Teaching and Assessment Reform), a partnership of universities, school districts and professional societies led by Michigan Tech, earned state and national status as a strategic STEM education program. [Read](#) the Tech Today article.



Michigan Tech marks a fifth straight year of enrollment growth. See the full article [here](#).

The Missoulian (Missoula, Montana) reported on the 20 safest college towns, including Houghton, home to Michigan Tech. See the full story [here](#).



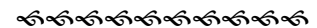
Michigan Tech made Princeton Review's 2017 "382 Best Colleges" [list](#). Michigan Tech has been included on the list since 1994.



Forbes ranked Michigan Tech 12th in the nation for graduates' mid-career earnings. [Read](#) full article.



The Michigan Tech **Spring Career Fair** was mentioned in the [Detroit Free Press](#). Read the [full article](#) about how companies are dealing with the struggle to recruit and retain talent.



# CAPSTONE CORNER

**Bob De Jonge**  
[rdejonge@mtu.edu](mailto:rdejonge@mtu.edu)  
906-487-2142

### What if...

...you were looking for some innovative ideas and designs for development of a key, iconic, portion of your product line?

What would you do?

What would be your strategy?

Well, for one insightful product manager, the strategy included engaging MEEM's Senior Capstone Design Program.

What!??

Yes.

In the fall of 2012 an SCD team was tasked with the design challenge of removing 25% of the Wrangler swing gate's mass, while preserving durability, manufacturability, packaging, and structural requirements.

Fast forward to December 2017 and the LA Auto Show, and the [200 pounds lighter] 2018 Jeep Wrangler was revealed.

Coincidence?

I think not!

Keep an eye open for the full story on this in coming weeks, and you'll see just how close the 2012 team's swing gate prototype is to the production version that contributes to the 200-pound vehicle weight savings-!

We are preparing to kick off 15 SCD projects as this goes to press, and planning for another 20 in the fall of 2018. If you are as forward thinking and strategically savvy as the project champion in 2012 was, you may just want to consider how MEEM's Senior Capstone Design program can be part of your strategy.

**CAPSTONE  
CORNER**