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[Read Full Story](#)



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Brent Kostich wins Outstanding Student of the Year Award



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Two awarded Tau Beta Pi Scholarships



State director of MDOT featured speaker at 2017 Engineers Week



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Economic Impact  
of WMU CEAS  
graduates

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## Upcoming Events

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## SAE Baja vehicle shreds the track in the Blizzard Baja

Western Michigan University's Baja SAE team successfully shredded the track on Saturday, Feb. 18 at Michigan Tech's Blizzard Baja, where the team's all-terrain vehicle performed well in a 4-hour durability race.

College teams from across the country design and build single-seat off-road vehicles and compete in national Baja SAE events. "The Blizzard Baja is a way for us to test our vehicle before our big national competition in June," said Alyssa Hartsig, a mechanical engineering student and member of WMU's Baja team. "It was so much fun to race the car in the snow and slush and see how it performed."



Nearly 20 universities and 50 vehicles competed at the event, which is organized and hosted by Michigan Tech annually.



Baja SAE is a student organization designed to promote teamwork, innovative ideas, and hands-on experience outside of the classroom. This year, the WMU team will compete against 100 other universities at the national competition in June at the Caterpillar Edwards proving grounds in Peoria, Ill. Events include an endurance race, acceleration test, hill climb and chain pull.

"Being involved in these competitions exposes students to real-world engineering design projects and their related challenges," said Dr. Andy Kline, associate dean for research and graduate education, who serves as advisor to the team. "Team members have to design and build an off-road vehicle that will survive the severe punishment of rough terrain."

He said in addition to building the vehicle, students also have to generate financial support for their project and manage their educational priorities. "It's a tremendous amount of work but the skills and experience they gain are irreplaceable," he said.

## Engineering deans bring ideas and issues to Capitol Hill

Deans from engineering colleges across the country met in Washington, D.C., in early February at the American Society for Engineering Education (ASEE) to share ideas and discuss common concerns. Some 150 deans from both public and private universities participated. They also spent time with legislators and legislative staff to talk about education issues impacting the state. Dean Toutanji, from WMU's College of Engineering and Applied Sciences -- along with the deans from Michigan State University and Michigan Tech -- met with the legislative assistants to Senators Debbie Stabenow (D) and Gary Peters (D), and the staff of representatives Fred Upton (R), Jack Bergman (R) and Mike Bishop (R).



Toutanji said discussions were focused on federal student aid, ways to strengthen the STEM pipeline, national manufacturing initiatives, and concerns about future funding for the National Science Foundation, the Department of Energy Office of Science and the National Institute of Standards and Technology. The impact of the proposed travel ban was also discussed.

“Our meetings with legislative staff were very valuable,” Toutanji said. “They understand the crucial role of engineering schools and our economic impact on the state, as well as our importance in educating a new generation of inventors and innovators.”

## Formula SAE vehicle to hit the track at Fiat Chrysler before competition

Western Michigan University's Formula SAE team will have a chance to test its new Bronco Racing 2017 vehicle at Fiat Chrysler Automobile's proving grounds in Chelsea, Mich., a month before it competes in the SAE International Collegiate Design Series in early May. “Being invited to participate in the Test and Tune weekend at Fiat Chrysler prior to the international



competition is a huge opportunity for our team,” said Evan Weese, project manager of the Formula SAE team.

At the event, students will have a chance to test their vehicle, participate in a design review with FCA engineers, and network and interact with other university engineering teams.

“Fiat Chrysler engineers will be evaluating all portions of our vehicle a month ahead of

time,” Weese said. “That will give us time to make any adjustments needed going into the competition.”

The SAE International Collegiate Design Series is a competition open to college students all over the world. Teams from Asia, Australia, Europe, North America and South America compete every year to see who can design, build and drive the most innovative vehicles. The goal is to create a competitive environment for college students to apply their technical theories to real world problems. WMU competes in the Formula Vehicle Challenge and the Baja Vehicle Challenge.

The annual competition at Michigan International Speedway attracts some 120 teams and is the biggest competition of its kind in the world.

“We were really excited to be invited to participate in the Test and Tune weekend before competing this year,” said Ramin Mirshab, engine team leader.

He described the 2017 car as the most advanced car to come out of the university. “There will be a lot of ‘firsts’ in it,” he said. He said Bronco Racing 2017 will have an increased lift-to-drag ratio, a lower center of gravity and an optimized powertrain. The new design also will include an intake manifold manufactured by using rapid printed nylon. “This rapid prototype intake manifold will weigh four pounds less than our 2016 model, and will reduce fuel consumption by increasing engine efficiency,” he said.

While the team continues working on the 2017 model in preparation for competition, members also recently exhibited the Bronco Racing 2016 vehicle at the Michigan International Auto Show in Grand Rapids. They did a PowerPoint presentation on advanced manufacturing techniques for Formula SAE vehicles and took home a \$1,000 award. Both the Formula and Baja teams were displaying their vehicles at the highly attended annual event.

In addition to WMU, participants at this year’s auto show included students from Hope College, Ferris State University and Grand Valley State University.

“These competitions are an excellent way for our students to network, showcase their vehicles and keep abreast of developments in the auto industry,” said Dr. Claudia Fajardo, advisor of the

Formula SAE team. “They put so much work and so many hours into these vehicles. It’s gratifying to see them get recognition for their efforts.”

## Mechanical Engineering Student Wins Outstanding Student of the Year Award

Brent Kostich, a graduate student in mechanical engineering, received the University Transportation Center Program’s Outstanding Student of the Year Award in Washington, D.C. in January. The University Transportation Center Program advances research and technology in many disciplines involving transportation.



Dr. Jun-Seok Oh, director of WMU’s Transportation Research Center for Livable Communities, nominated Kostich for his work in a research project for the center on the “Effect of Cycling Skills on Bicycle Safety and Comfort Associated with Bicycle Infrastructure and Environment.” Kostich designed and implemented the sensor system and data collection for the project.

Kostich said the project involved “using bits and pieces from all of my classes with other outside knowledge to aid in the design process.” He was interested in the project because it was dynamics related, which he said is a passion of his. Kostich also is passionate about engineering as a field and said he would love to inform people in a

practical way of what makes an engineer. “If people truly understood engineering -- what engineers do, how they solve problems and contribute to the world – I believe there would be more individuals interested in engineering and other STEM fields.”

Kostich, who is from Clarkston, Mich., is teaching a recitation class this semester. “It’s very rewarding helping undergraduate students get a better understanding of the material,” he said. He will be graduating this spring.



## Area students have a chance to “Dream Big” during Engineers Week

Some 400 middle school and high school students from the Kalamazoo area had a chance to “dream big” when they were treated to a private screening of a new 3-D IMAX film featuring engineers, their work and engineering’s greatest marvels around the world.

The showings -- during National Engineers Week -- were sponsored by WMU’s College of Engineering and Applied Sciences and the Transportation Research Center for Livable Communities at WMU.

Dream Big: Engineering Our World was designed to bring engineering into the forefront of society and inspire students to pursue engineering careers. Dr. Jun Seok Oh, director of the Transportation Center for Livable Communities, said he was pleased the center could provide the outreach opportunity for students and get them interested and excited about the engineering field.

“Engaging young people with the Dream Big movie was a way to show not only how engineers construct bridges and buildings, but how we solve problems and create solutions that really impact our society on a much larger scale.”

Several students from WMU’s student chapter of the American Society of Engineers participated in a panel and answered questions from the audience following the movie.

Dream Big is the first giant screen project to promote the educational STEM movement (Science, Technology, Engineering and Math). It was produced by the MacGillivray Freeman Films, the Academy-Award nominated producers of Everest and The Living Sea, and in partnership with the American Society of Civil Engineers, Bechtel and a coalition of engineering organizations.

## Two awarded Tau Beta Pi Scholarships

Samuel Dayton, a senior in mechanical engineering, and Eric Pietrowicz, a senior in electrical engineering, were awarded The Tau Beta Pi Scholarship for Michigan Kappa based on their academic achievements and activities outside the classroom. Dayton serves as a mentor in the Peer Student Success Team in the Lee Honors College. Pietrowicz co-founded the WMU Chapter of Engineers without Borders. Tau Beta Pi is an honor society that recognizes



“distinguished scholarship and exemplary character” among engineering students. The Tau Beta Pi national organization selected WMU’s Michigan Kappa Chapter for the scholarship based on “three years of outstanding service and activities.” The local chapter and the College of Engineering and Applied Sciences matched these scholarship funds. Only 19 of about 240 chapters earned this award. The chapter was recently notified that it has earned its third consecutive such

award, enabling it to offer another scholarship next semester.

## **State director of MDOT featured speaker at 2017 Engineers Week**

More than 180 students, faculty and industry professionals attended the 38<sup>th</sup> annual Engineers Week dinner hosted by WMU, a celebration of the field of engineering and its contributions to society. This year’s featured speaker was Kirk Steudle, director of the Michigan Department of Transportation (MDOT).

Steudle spoke about future mobility, rapidly changing technology and its impact on the movement of people and goods. He talked about the relevance of autonomous, or driverless, cars and the key role MDOT is talking to help researchers and developers understand road design, traffic science and safety measures for autonomous use and connected vehicle technology.



The annual Engineers Week celebration is organized by engineering societies to increase public awareness and appreciation of engineers and their work. Fifteen Southwest Michigan engineering societies joined WMU in the Engineers Week observance this year.

Each year the Southwestern Michigan Engineering Societies Committee E-Week Committee reaches out to local businesses, professional societies, groups and individuals to sponsor this event. Their financial support is used to underwrite speaker expenses, award

scholarships, and subsidize registration fees for students.

Dr. Jorge Rodriguez, WMU associate professor in the Department of Engineering Design, Manufacturing, and Management Systems (EDMMS) and who helped organize the event, said donations totaled more than \$6,500. “This event involves current students at our college as well as high school students interested in a career in engineering and technology,” he said. “It is about discovering engineering and inspiring young people to become engineers. It would not be possible without our donors, who continue to contribute to this important event each year. We greatly appreciate their ongoing support.”

Five WMU engineering students received scholarships sponsored by the college’s E-Week Committee. They included Magreth Haji, Anna Konstant, Sara Rodriguez, Lukas Swoboda and Tessa Williams. In addition, the American Society for Civil Engineers awarded scholarships to Kaitlyn Dziepak and Matthew Moulton.

## **400 area students compete in Science Olympiad Tournament at WMU**

Western Michigan University hosted more than 400 middle school and high school students on Saturday, Feb. 25 for a regional Science Olympiad tournament. Recognized as one of the nation’s most prestigious science, technology, engineering and math competitions, Science

Olympiad involves more than 7,000 teams in all 50 states. WMU, host to the Region 10 competition, included students from Allegan, Barry, Branch, Calhoun and Kalamazoo counties.



Teams competed in challenges such as Wright Stuff, a flight endurance contest powered by rubber-band engines; Mission Possible, developing a Rube Goldberg device and energy transfers to complete a task; and Scrambler, which involves building and racing a model car while transporting an egg on its hood.

“Science Olympiad is a program with a mission to inspire the next generation of engineers and scientists,” said Scot Conant, of WMU’s College of Engineering and Applied Sciences and regional tournament director. “It’s an exciting day for these talented students participating in rigorous hands-on competitions.”



WMU facilities were home to a full day of spectator activities. About 150 WMU students, faculty and staff volunteers helped with the event.

## Economic Impact of WMU College of Engineering and Applied Sciences graduates

