CARRY THE FALLEN
How one man’s heart-wrenching journey became a mission to end veteran suicides and help lead a national movement

AND THE VETERANS RUCKED ON.
"This is really it."

Computer Networking and Systems Administration major Sean Branner, who graduated this spring, commented on how it felt to walk that stage at Commencement. “People tell you that time flies, but it’s not until you are in the moment that you actually realize how right they were. My years in college were the longest of my life in terms of hours spent in the lab and studying—but the shortest when it came to all the new experiences, friends I made, and fun I had.”
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Michigan Technological University is an equal opportunity educational institution/ equal opportunity employer, which includes providing equal opportunity for protected veterans and individuals with disabilities.
SPRING CAREER FAIR SEES RECORD NUMBER OF RECRUITERS ON CAMPUS

Huskies are in high demand. There’s no better way to illustrate just how much companies want Tech grads than with the success of our twice-annual Career Fair. This February’s event was the largest spring fair yet, drawing big-name companies like Amazon, Caterpillar, and Target—and connecting thousands of eager job seekers with corporate recruiters.

HUSKIES ARE IN HIGH DEMAND

242 COMPANIES IN ATTENDANCE

NEARLY 3,000 STUDENT ATTENDEES
(IN 1 PACKED-TO-THE-BRIM MULTIPURPOSE ROOM)

CORPORATE REPS FROM 26 STATES AND 1 CANADIAN PROVINCE

2,100 INTERVIEW SLOTS FOR STUDENTS DURING THE DAYS FOLLOWING THE FAIR
JOHN LEHMAN TAPPED FOR EXPERIENCE IN CULTIVATING STEM SKILLS

 Associate Vice President John Lehman tests the ooblek—an ooey-gooey substance that allows kids to “walk on water.”

“WE LIKE TO THINK OF IT AS A GROWTH MINDSET. ANYONE CAN GROW INTO A STEM FIELD.”

John Lehman, associate vice president of enrollment, marketing, and communications, has authored a chapter in Advancing a Jobs-Driven Economy: Higher Education and Business Partnerships Lead the Way focused on how higher education institutions can work with companies to host science and engineering festivals.

It’s a fitting topic, considering the success of Tech’s Mind Trekkers program, which sends a student-run traveling science and engineering roadshow across the country.

THE SCIENCE OF COMMUNICATING RESEARCH

What can happen if research scientists and engineers don’t properly communicate their work to the general public?

The answer, according to Civil and Environmental Engineering Professor Alex Mayer: all sorts of bad things. Funding can dry up as policymakers who don’t understand science pull the plug. Advocacy groups can unite to oppose their research. The news media can misunderstand.

To combat the issue, Mayer—the Charles and Patricia Nelson Presidential Professor at Michigan Tech—is helping the next generation of researchers learn how to communicate their work more effectively. With a National Science Foundation (NSF) grant, Mayer is overseeing a fellowship program that teaches PhD students in a variety of fields to explain their research in K-12 classrooms and to write news releases to communicate with the public through the media.

A handful of graduate students have already completed the training, which began last fall semester. Nicholas Bolton, a PhD candidate in Forest Science, worked with Michigan Tech’s director of news and media relations to learn how to craft the perfect press release.

“I’m a much more efficient communicator now,” Bolton says. “Because of this experience, I’m able to articulate my work to people and show the application of my research in their daily lives.”
As a student, Amber Lily Kenny ’07 served as a Peace Corps Natural Resource Management and Agriculture volunteer in Togo, West Africa, and worked with USAID in Kenya. Today she is a tenured agricultural foreign officer with USAID in Uganda.

**Michigan Tech’s award-winning Peace Corps Master’s International (PCMI) program is offering three new options: Master of Science degree programs in Computer Science, Electrical and Computer Engineering, and Geographic Information Science.**

The new degree options will enable more students to take part in PCMI—a program in which students earn a master’s degree while simultaneously serving in the Peace Corps. Students typically take two semesters of courses on campus before volunteering for two years overseas and then returning to Michigan Tech to complete their degree.

“The new programs in computer science and ECE were pitched to the Peace Corps as an opportunity for our students to serve in math and science education or other sectors needing IT and technology expertise,” said Kari Henquinet, PCMI director at Tech. “Our new PCMI students will bring technical training together with the strong interdisciplinary training that all of our Tech PCMI students have.”

Professor Leonard Bohmann, faculty coordinator for the new ECE PCMI program, thinks the benefits his students can provide will be far-reaching.

“ECE students would be well-versed in applying many technologies to help the communities in which they volunteer,” he says. “They might work on wireless technology projects or remote, stand-alone power systems, like photovoltaic or hydro-energy. One of the problems in many remote locations is access to power, especially for medical clinics. ECE students can help power them and keep medicines cold that need to be cold.”

“Most people in the world today are labeled with letters more commonly used as variables in math equations.” Andrea Spencer discusses the challenges of generational labels like Gen X, Y, and Z.

**“Give us the freedom to determine how we learn best and what instruments best complement our learning.”**

Adam Romanko urges all Michigan Tech instructors to permit portable tech in their classrooms.

“While there are negative voices out there, there are also louder voices waiting to combat them.”

A glass-half-full outlook is revealed during a pro-con debate about the dangers of promoting harmful stereotypes on social media.

“First, remember to sleep. Whether you like it or not, you will eventually succumb to it.” Pratik Joshi offers essential study advice prior to final exams.

**HAVE KNOWLEDGE, WILL TRAVEL**

Michigan Tech adds three new PCMI programs
Current student Ben Wittbrodt shared this amazing photo with us. Thanks Ben! #PureMichigan

OVERHEARD ON SOCIAL MEDIA

After a stunning display in mid-March, the Northern Lights sparked a conversation between current students and alumni about aurora spotting.

**COMMENTS**

**Ben Wittbrodt**
I sure was surprised when I saw the shooting star streak across the sky! Perfect night for no sleep and aurora spotting!

**Lori Caelwaerts**
I recall “chasing” the lights one night when I walked out of rehearsal in Walker about 10 PM and a bunch of us spotted the lights. Then we kept driving north to try and find a less impeded view. Ended up watching them from McLain until 6 AM. The TA teaching my 8 AM Revisions section was unimpressed with my attempts to stay awake in class…

**Britt Daiss**
One of the things I miss most about da Tech!

**Margie McCormick**
The first time I ever saw the Northern Lights was when I was visiting Snow Carnival 1986. Breathtaking ^-^

**FUN FACTS**

**ABOUT NORTHERN LIGHTS**

**Earth isn’t the only planet with “night lights”**
Auroras have been spotted on Jupiter, Saturn, Uranus, and Neptune.

**They’re aptly named**
The name ‘aurora’ comes from the Latin word for sunrise.

**There’s a “down under” version**
In the southern hemisphere, the Lights are referred to as aurora australis.

**They truly are high in the sky**
Most auroras occur at a height of 55–80 miles. Astronauts on board the International Space Station are actually at the same altitude as the Northern Lights and see them from the side.
FIELD
NFL Viking and Michigan Tech Alumnus
Joe Berger ’05 talks to us about football, family, and what it’s like to be the only engineering guy in the locker room. (Just don’t call him the smartest guy.)
“There are a lot of smart guys in any locker room,” he points out, and the Minnesota Vikings are no exception. You can’t be dumb and succeed in a sport where every play is as tightly choreographed as Swan Lake and triggers a release of energy bordering on thermonuclear.

But some smart guys are smarter than others, and back in 2005, when Berger was drafted in the sixth round by the Carolina Panthers, people couldn’t help but notice that, along with a mantle-full of Lineman of the Year and All-American honors, he wielded a 3.8 GPA in mechanical engineering from Michigan Tech.

Since then, he’s also played for the Miami Dolphins, the Dallas Cowboys, and, starting in 2011, the Vikings. He’ll probably be there awhile. In March, the veteran guard signed a $2.155 million deal to play through the 2016 season, according to the Minneapolis Star-Tribune.

What makes Berger so valuable at a time when most football players are a good five years into retirement? For one thing, not that many pro athletes have the intellectual chops to graduate magna cum laude. “Joe doesn’t have any trouble understanding a playbook,” says Tom Kearly, Michigan Tech’s head football coach. “He can play three of the five positions in the offensive line, and that makes him quite valuable.”

It almost didn’t happen. Berger was a football standout in Newaygo High School (enrollment: 511), but he lacked heft, and college coaches were not beating a path to his door. Nevertheless, he excelled in math and science, so when the time came to leave his hometown in western Michigan, Berger put away thoughts of football and focused on a degree in mechanical engineering. Michigan Tech was the only school he applied to.

His father, however, thought anyone who loved the game as much as his son did shouldn’t give it up so easily. “My dad said, ‘You should send a film up and see if you can play,’” Berger says.

It worked. Former head coach Bernie Anderson saw promise in the six-foot-four, 210-pound linebacker. “He said I could walk on and maybe get some playing time by my senior year.”

Then Berger began what could modestly be called a growth spurt. Unlimited dining hall food, protein powder, relentless workouts in the weight room—by his final year in the program, the stripling from Newaygo had grown an inch, put on eighty pounds, and morphed into a fearsome presence on Tech’s offensive line.

“He was a late bloomer, and he had good genetics,” says Kearly, then the team’s offensive coordinator. “And he was a tremendous worker; the strength gain he got was huge.”

Berger added weight gradually, Kearly stressed, “just right for college students. It’s one reason he was Tech’s Offensive Lineman of the Year.” Other reasons were his energy—“a great motor”—speed, and agility—“great feet.”
And of course, his brains. It’s been a winning combination. “Joe has made himself very marketable,” Kearly says. “If you are not great at any one thing, you better be good at a bunch of things,” says Berger, who fills in at center when he’s not playing guard or special teams. That versatility allowed him to play in all sixteen of last season’s games and step into the starting lineup for the final nine.

Berger has another attribute: he stays out of trouble. Married to his high school sweetheart and father of three kids, the smartest guy in the locker room could also be voted Least Likely to Be Arrested. “My family raised me to love God and work hard,” he says. “I’m so grateful to have parents like that.”

Berger began playing football when he was a tot. “Our parents would kick us out of the house, and we’d play outside all day,” he remembers. “When I was eight or nine years old, the neighbor boy got to play football before me, and it hurt. Then I started playing myself the next year, in third grade. I’ve done it ever since, and I’ve loved every minute of it.”

But he’s not obsessed. Berger vividly remembers March 18, 2003, when Coach Anderson told his team that budget shortfalls had forced the University to cut the football program. “It was a tough day,” he says. “We were complaining because we had to do morning running, and then we found out we wouldn’t be doing our morning running. It was the worst way to find out.”

But even as his teammates were scrambling to find a niche in other collegiate programs, Berger stayed put. “I didn’t come for football, and I wouldn’t leave for football. I’d wanted to be an engineer since I was sixteen, and I was at Michigan Tech to get my degree.”

Two weeks later, the University put football back in business, and the team went on to rack up one of its best seasons ever. The Huskies were 9–0 going into the Bash at the Big House against undefeated Grand Valley State. But the game at the University of Michigan stadium did not end well. Not only did Grand Valley win, Berger earned a knee injury that almost torpedoed any chance for a future in the NFL. “The Bash at the Big House isn’t a great memory for me,” he notes.

But there were lots of good memories of Tech: winning the conference, broomball, sliding down famously steep Agate Street in a grocery cart on skis …

Really? “We took the wheels off—we’re engineers, you know—but we didn’t think about brakes,” Berger explains. “Fortunately, we were able to stop in a snowbank.”

It’s been a circuitous trip from retrofitting shopping carts to the Minnesota Vikings starting lineup, but for Joe Berger, it’s all been good. “I loved every minute at Michigan Tech, and I’ve loved every minute in the NFL,” he says. “Sure it’s hard. Perfection is expected, and a lot is at stake. But nothing is better than having a good game.”

And when the time comes to put away the football, he plans to fulfill the dreams of that sixteen-year-old boy from Newaygo and turn to a long-deferred career in engineering. “I’m so thankful to Michigan Tech for the opportunity to do that,” he says. “There aren’t a lot of NFL players with an engineering degree.”
A Viking
Joe Berger isn’t the only Minnesota Viking with links to Michigan Tech. One other is the Harley-riding, axe-shaving, Green Bay Packer–baiting wild man known to most fans as Ragnar.

For every home game since 1994, Ragnar the Viking, aka Joe Juranitch, has donned a shaggy coat and custom mukluks and hopped on his motorcycle to lead the Viking charge out of the tunnel into the gridiron. But during the other six days of the week, Juranitch is most often found 260 miles north of the Twin Cities, in Ely, Minnesota, where he leads research and development for the family business, Razor Edge Systems.

Juranitch is a connoisseur of sharp. Before he became Ragnar, he broke his father John’s Guinness World Record by shaving his face with an axe in 8 minutes, 43 seconds. This toe-curling stunt illustrated in no uncertain terms that the company is literally about the cutting edge. The firm manufactures sharpening tools, primarily for the meatpacking industry but also for the general consumer, including chefs and sportsmen. And the newest members of Razor Edge’s R&D effort are five Michigan Tech students led by chemical engineering junior Matthew Manning (no relation to quarterbacks Peyton and Eli).

The students are members of the Consumer Product Manufacturing Enterprise, a consortium of student teams that tackle problems and develop products, often on behalf of industry. Manning’s group has been working with Razor Edge to expand and develop the company’s sharpening technologies.

“We provide sharpening equipment for the meat industry, but at this point nobody can say what sharp is, what quantifies sharp,” Juranitch says. “For instance, if you’re using a knife all day long, what would it be on a sharpness scale: a 5, a 9, or a 10? And how would that affect your productivity, and then what happens to your shoulder or your arm?”

The Enterprise’s immediate goal is to develop just such a scoring system. “Our stretch goal is an ergonomic study, correlating sharpness with production and/or worker fatigue,” Manning says.

“I’m already thinking about our next project,” says Juranitch. “I’m really excited about the team we’ve put together.”

That’s understandable. Manning also knows a thing or two about sharp. An accomplished cook, he hopes to one day own his own restaurant. In the meantime, he says, “I don’t let my roommates touch my knives.”
THROWING SHADE

1

2

3
Bamboo isn’t just for pandas. As an industrial material, it can be used for everything from t-shirts to floor planks to kitchen spoons. Versatile and fast growing, the thick grass has broadened the horizons of sustainable material options—and now it’s throwing shade on the sunglasses industry.

If you’re searching for a sophisticated, sustainable pair of shades, look no further than Michigan Tech. Second-year Tech student Adam Weber and his high school friend Matthew Anderson, a University of Michigan student, have begun a budding new bamboo sunglasses company called 1st Element—right out of Weber’s residence hall room.

Their designs are sleek and every pair is unique—the variation in bamboo texture looks like a soft etching and the product names nod to famous forests around the world. With brightly colored reflective lenses and earth-toned frames, the sunglasses evoke both hippie nostalgia and hipster coolness.

“When you buy a pair of 1st Element sunglasses, you’re not buying frames made with petroleum-based plastics or an extensive metal process,” Weber says, explaining how he and Anderson focused on minimizing costs without diminishing their environmental commitments. The key is bamboo itself: Mature plants can grow three feet in a day, making it a quickly replenished resource. But 1st Element didn’t stop at the frames, Weber is quick to point out. “For every ten pairs we sell, we will have donated enough money to Conservation International to save one acre of land.”

Along with donating a portion of their profits, Weber and Anderson sought to cut down the cost of their products. In fact, the $120-$150 price tag of bamboo sunglasses is what prompted them to found 1st Element. Now, the duo has knocked the price down to $75 per pair.

The sunglasses are also hypoallergenic and less sensitive to temperature fluxes (just think about how your metal frames feel in July or January). “Bamboo is a very porous material,” Weber adds. “So, if you drop your sunglasses in the lake, they’ll be floating there for you.”

Lazy floating, however, is not a phrase Weber and Anderson get to use for themselves. Starting a values-driven business in college is no easy feat. As co-founders, Weber and Anderson have worked hard to earn several start-up grants, along with running a successful Kickstarter campaign and overseeing a team of students to help with the business.

Weber admits the work is challenging, but he says juggling 1st Element, plus another job and schoolwork, is worth it.

“Michigan Tech really emphasizes working on teams,” he says. With 1st Element, he gets to collaborate every day. “I’m able to work with students from all different degree programs all over Michigan.”

Weber and Anderson plan to continue running the business while finishing school. They had set a goal of selling 100 frames by the end of 2015; to date, they’ve sold about 150, a success of their Kickstarter campaign. Once they have a stable business model, they hope to add a unique Upper Peninsula-inspired line of maple and hickory sunglasses to their collection. Until then, the crew will keep rocking the bamboo frames—just watch out for hungry pandas.

1. Hiawatha
1st Element’s iconic original.

2. Manu
Similar to the Hiawatha in shape, but with a bold, black hue.

3. Clairvaux
Modern style with a rich, medium-dark finish.

1stelement.co

1st Element
a sustainable lifestyle company.
Humans do not walk in straight lines—but that’s what most lower-leg prostheses are designed to do. To achieve more natural turning motions, Assistant Professor Mo Rastgaar is putting a new spin on prosthetic robotics.
A human foot and ankle—which has more than 26 bones and 33 joints—is hard to mimic with prostheses.

The ankle is the sweet spot. The relatively small but complex joint greatly affects how humans walk, twirl, and jump. Turning is an essential motion.

So, why are ankle prostheses often designed with such limited range of motion? It’s a question Mo Rastgaar, an assistant professor in mechanical engineering-engineering mechanics, has often wondered—a question that ultimately led him to build a better prosthetic ankle joint.

Rastgaar’s design seeks to imitate natural turning in the human gait by enabling the ankle joint to move more freely. His synthesized ankle joint features two controllable degrees of freedom: up-down and side-side, which allow for rolling, an innate motion in the human ankle.

Rastgaar’s robotic prosthesis uses more than just a moveable joint to create a more natural walk. The design itself can only mimic the complexity of human feet and ankles—which sport more than 26 bones, 33 joints, and 100 muscles, tendons, and ligaments. So along the bottom of the foot is another feature to infuse a natural gait: a row of pressure-sensitive sensors. These sensors can detect changes in pace, direction, and pressure, and then send signals to a microprocessor that adjusts the prosthesis’ motion.

All told, the robotics, mobile joint, and sensors make the prosthesis much more steerable than current microprocessor units on the market, which only feature a toe up-down motion. “That’s only fine if you are marking time on a treadmill,” Rastgaar says.

Current models also tend to be bulky. Rastgaar, his PhD student Evandro Ficnaha, and members of Michigan Tech’s Human-Interactive Robotics Lab (HIRoLab) have worked to change that.

“Powered prostheses should be lightweight, and you also should be able to apply an adequate amount of torque to the ankle joint,” Rastgaar says, demonstrating the mechanics of the ankle-foot prosthesis as it lumbers around a mechanical, circular track. The HIRoLab built the track specifically to assess how the prosthesis moves and turns.

To eliminate bulk and free the ankle, Rastgaar and his team moved the power mechanism up and away from the leg using a cable-driven mechanism. The basis of the design centers on making microprocessor prostheses more usable.

“I wanted to help people in a very direct way, and that’s what we are doing,” Rastgaar says of his work, which is funded by a five-year Faculty Early Career Development (CAREER) Award from the National Science Foundation. “Eventually, I’d like to commercialize our prosthesis. It should be helping amputees walk.”

Fast Facts:

• An average male in the US takes 5,340 steps each day; females average less at 4,912 steps.

• More than 1 million people in the US live with lower-leg amputations.
Terminally ill armed forces vet and Michigan Tech alumnus Justin Fitch ’05 speaks out about the most important mission of his life: ending veteran suicides.

Twenty-two veterans per day—nearly one per hour—end their own lives. Nearly 8,000 a year. Roughly 6,700 soldiers have been killed in action since September 11, 2001, the longest stretch of continuous military action in American history.

“I don’t view these as statistics,” says Justin Fitch, a 2005 Michigan Tech graduate and retired Army major. “These are people. Imagine if a loaded Boeing 757 crashed every week. The nation would be interested in that. It would be on the news.”

Ten years after commencement, Fitch is fighting to bring awareness to these numbers, even as his days pass in a way few his age could understand.

“It’s surgeries, and recovering from surgeries,” he says. “Otherwise it’s three days of chemo every other week. That’s why I was medically retired. I have stage 4 colon cancer, which is incurable and terminal. My time on Earth is limited.”
Fitch arrived at Michigan Tech in 2000 not knowing what he wanted to do. Soon, though, he found camaraderie, friendship, and mentorship in his McNair Hall “house,” the Mama’s Boys. He looked up to students who joined the ROTC program, and before his second year, he too decided to join—further motivated by the events of September 11, which occurred just one month later.

He graduated Cum Laude with a Bachelor’s of Science in Business Administration, a concentration in Industrial Marketing and Management, and a minor in Military Science. Unlike most graduates at commencement, Fitch was in uniform, commissioned as an officer, initially stationed at Fort Benning, Georgia.

Until the last several months, Fitch’s military career was active, including service with the 2-27th Infantry, with whom he deployed to Hawijah, Iraq, for more than a year. More recently, he was a company commander based in Boston, overseeing a team working in research and development in an engineering detachment.

“It was a very interesting job,” he says. “I enjoyed it. But obviously I cannot do the things I used to be able to do as a soldier.”

That Fitch still has days to pass is something he finds motivating, and he is determined to use them to help others.

Suicide prevention is an issue that is deeply personal to Fitch. It’s something he understands, it’s something he relates to.

It’s something he once attempted.

“There was a big stigma in the military about suicide at the time,” he says, referring to his own attempt when deployed to Iraq the first time. “That’s an archaic way of thinking. Mental wounds are real.”

The stigma of mental illness is a very real obstacle, and not only within the military. Fitch puts it into perspective alongside other illnesses and injuries.

“You have a real injury,” he says. “If you broke your arm, you’d get help. You’d go get yourself healed. That just makes sense. It only makes sense to get this injury treated, too. Not all wounds are visible. There’s a culture that years ago, only the weak get help. That’s BS. Getting help is not a sign of weakness—I believe it is a sign of strength.”

Today, Fitch contemplates the end of his life as a matter of how much he can get done. He got involved with Carry the Fallen, a project of the nonprofit Active Heroes, after hearing about their mission to raise awareness and find ways to prevent veteran suicides. Their focus is on helping veterans and their families.

“I’m credible on this issue, facing death the way I am,” he says. “People listen to you when you’re in this state. I use that soapbox to speak out on this issue as loudly as possible, to talk about this project.”

Carry the Fallen organizes rucks—a march with a heavy pack of gear strapped to your back.
TWENTY-TWO VETERANS PER DAY—NEARLY ONE PER HOUR—END THEIR OWN LIVES.
FEATURE STORY

Carry the Fallen organizes rucks—a march with a heavy pack of gear strapped to your back. He put in his first marathon-length ruck along the Boston Marathon route in 2013.

“Never completed a total of five of these,” he says. “As my health has declined, I haven’t been physically able to do the entire last couple of marches. I’m there working a support vehicle.”

Ruck marches go anywhere from three to twenty-two hours.

“Twenty-two is obviously the hardest ruck—and the most symbolic,” says Fitch. “We bring veterans and civilians together to carry this same burden so many veterans carry every day. If we even lower the number by one or two, that’s a success. Just for one day—that’s success.”

Once Fitch was medically retired from the armed forces, he moved from Boston to Wisconsin. Pleasant Prairie is where he now sleeps and gets his mail, but his work—and that of Carry the Fallen—is to build a home for veterans and their families to interact, communicate, and heal.

“All of this money is working to build the national American veterans family retreat,” Fitch explains. “It’s 144 acres in Shepherdsville, Kentucky, near Fort Knox. We’re in the building phase, but already working to bring civilian volunteers together to build infrastructure. We’ll have cabins, campgrounds, and a lake is being built for the calm of fishing.”

Also in the works for the welcome center is job training, resume writing classes, job fairs, and resiliency training. “It’s really just a beautiful plan, and I’m absolutely confident it’s going to work.”

They’ve raised more than $500,000 for the retreat—more than 10 percent of the goal. Contributors in Justin’s name have donated $86,000, and already enough of the retreat is in place to start making a difference. “The retreat is already functional,” he says. “As we get it closer to completion, it just gets more and more effective. I’m just trying to make as much as possible happen before I die.”

Despite deteriorating health conditions, Fitch fights to live his life to its fullest while dedicating what time he can to Carry the Fallen. His most recent Carry the Fallen event was March 21. Friends and family in his hometown of Hayward, Wisconsin, set up and lead the ruck march in Hayward. Justin joined them to ruck as many miles as he could.

The numbers he’s marching against—statistics behind suicides—are sobering. About 23 percent of all suicides in the US are veterans, even though they make up a small percentage of the population. And one misconception Fitch is dealing with is that it’s only young veterans coming back from recent conflicts.

“A significant portion are the older generation,” he says. “40 percent or so were deployed prior to 9/11. That’s the epidemic we face. My mission is to bring the
Fitch is still working an important mission, even after multiple combat deployments.

JUSTIN

Fitch is doing what he can with the time he has left. Every dollar raised is a step closer to seeing the retreat completed, and every step along the path is making a difference in the lives of everyone this effort touches.

“We know we had one person who was going to commit suicide the day of our march. He showed up and put on a ruck instead. And that’s one! That’s one who is still with us for another day.”

Fitch is the recipient of the 2015 Humanitarian Award from the Michigan Tech Alumni Association.

For more on this award and our other honored alumni, visit www.mtu.edu/alumni/awards.

YOU CAN HELP JUSTIN AND HIS FELLOW VETERANS CARRY THE LOAD.

VISIT ACTIVEHEROES.ORG/CARRY-THE-FALLEN/ AND JOIN THE MARCH.

Building relationships helps the movement—and helps many to heal.
SMART SECURITY FOR SMART TECHNOLOGY
The technology of the future is here—but is it safe? Professor and cybersecurity expert Shiyan Hu tells us how to be security savvy in a technology-smart world.

The technology of the Jetsons is here. Smartphones are just the beginning; already, a number of “Smart Home” appliances are available. That’s right, your thermostat, fridge, and washing machine could be as much of a smarty-pants as your tablet.

But with that convenience comes increased security risks. Shiyan Hu is an associate professor of electrical and computer engineering and he studies cybersecurity. Every digital link between smart appliances and you, Hu says, is a pathway for hackers to take over your house, maybe even your community. And as all aspects of life become more digitally connected, we increase the risk of serious hacking threats.

“We cannot have perfect security for smart devices,” Hu says. “But we can make improvements.”

So, how can you increase your own cybersecurity? Hu has several recommendations.
It takes just a moment and a few lines of code to breach a smart home.

TOP TROUBLEMAKERS

Ooh! A brand-new pony, I’d buy that!
You found the perfect set of glow-in-the-dark My Little Pony figurines—score! But before you click to submit that payment, think before you buy. Hu says online buying is one of the most common security issues.

Some tips to keep your data secure:

- **Avoid open networks.** More-secure networks require signing in with a passcode.
- **Use websites that encrypt your information.** Scrambled data is harder to break into—look for a little padlock up by the URL address.
- **Watch out for auto bill pay.** Especially with smart appliances, unnoticed energy spikes get swept under the rug if you don’t monitor your accounts.
- **Hmm, I wonder where that link goes.** That email from Aunt Betsy? No, she really isn’t in London and she doesn’t need you to send over a thousand quid. If you have any doubt about the validity of a link, email, or Facebook message, check it out:
  - **Hover over the link.** Does it match where it says it goes?
  - **Ask where it came from.** Call Aunt Betsy—“You went to London and didn’t tell me?”
  - **Report it.** Especially for work accounts, companies have a way for you to let IT and others know about potential hacks.

Dang! What was my password again?
Don’t use your favorite cereal and birth year for every single password. While you may remember cornflakes1970, it’s crummy security. So is repeating a single password or writing down multiples. “And there are so many passwords to remember!” Hu exclaims. “If it’s simple, it’s easy to guess, but if it’s complex it’s hard to remember.” Try this for balance:
SMART HOME TIPS

1. **Hands Off**
   Don’t let people you don’t trust touch your smart electronics. It takes just a moment and a few lines of code to breach a smart home. That happens much quicker if your hacker has a USB or device that taps into your system.

2. **No Hands Needed**
   Keep in mind that hackers don’t actually need to touch your device. “It’s much harder to do,” Hu says. His research group can remotely hack old models of smart home devices, so he warns that outdated equipment and software can pose a threat.

3. **Upgrade Now Available**
   Of course, each upgrade itself is a risk since the connection can potentially be breached. One way to dash a hacker’s hopes is to limit the number of remote upgrades you run on your device. “Sometimes automatic updates are good, though,” Hu says. “The only way to proceed is with caution.”

4. **Hide That Wifi**
   If you want to avoid sneaks, be sneaky. Having an invisible wifi network makes it less available to rookie hackers. Do this by disabling automatic searches for your network under your settings.

5. **Neighborliness**
   Get to know your neighbors. Seriously—they actually have the most reason to hack into your smart home. Offloading some energy use onto a neighbor’s smart home can cut down the energy bill. A good old-fashioned chat over the hedge can cut that nonsense out.

- **Use the first letter of each word in the opening line of a song you know.** IttRL1970 is the opening of Queen’s “Bohemian Rhapsody”.
- **Choose a couple of capital letters.** IttRL1970
- **Avoid strings of numbers.** 19IttRL70
- **Mix in some punctuation.** 19IttRL.70 — now that’s a safe password, and you can probably remember it.
BOOTSTRAPS TO BIG SUCCESS

Brooke Harris at her home in Olympia, Washington.
Michigan Tech ranked first in the state and 42nd in the nation in a new breed of ranking released for the first time this year—

the social mobility index, designed by CollegeNET and Payscale to assess the role of higher education as a conduit for economic and social advancement and to measure how well colleges and universities contribute to solving the problem of economic disparity. More than just a statistic, it reflects real opportunities for the students who need them most.

Social mobility.

It sounds like one of those academic terms, full of sound and fury, signifying nothing.

Except in the case of Brooke Harris ’79, it signified a life-changing opportunity: a Michigan Tech education.

Harris’s father, whose schooling ended after sixth grade, died when he was 42. Her mother, who had a seventh grade education and was visually impaired, moved from Montana to Chassell with her three young daughters. They lived in a one-bedroom house, making do on social security and a small veteran’s pension. The girls slept in the attic. “By today’s standards, it was very stark, but although we lived frugally, there was always enough food, clothing, other basics, and a supportive mother who wanted the best for us, including an education,” Harris says.

“Mom really instilled in us that we had to go to school if we didn’t want to end up like her,” she recalls. And all three sisters followed their mother’s advice. Harris’s sister Kriss works as a teacher in the Houghton schools and her sister Sharon is a licensed practical nurse. “I am so proud of them,” says Harris.

There wasn’t much to stimulate the transplanted Montana girl in school. Chassell Schools Superintendent Ed Huls noticed that she was getting bored and frustrated and offered to work with her one-on-one.
SHE SWEARS ONE THING MADE ALL THE REST POSSIBLE: “THAT FOUR-YEAR DEGREE FROM MICHIGAN TECH.”

After spending an hour a day exploring her favorite subject—philosophy—with her, Huls told Harris, “You really should go to Tech.” He offered to excuse her from high school classes so she could audit university courses. Michigan Tech also recognized her potential. “You don’t have to audit,” they told Harris. “If you pass your courses here, we’ll give you college credit.” She did, and Tech did.

Tuition at Michigan Tech was low in the mid-70s, says Harris, “but nothing was affordable for my family.” Harris, who left home at eighteen and put herself through Tech, took out loans, won scholarships, and did federal work-study. One place she worked was Communication Services, predecessor to University Marketing and Communications.

One day Harris came to work fuming about a misogynistic remark a Chassell councilman had made. “Well,” said her editor, Bev Oldfield, “are you going to stand there complaining, or are you going to do something about it? If you run for office in Chassell, I’ll be your campaign manager.”

With a $200 war chest, Harris and Oldfield mounted the student’s campaign. And she won, the first woman to serve as Chassell Township clerk.

“That one, kind dare launched me into a career in government,” Harris says of Oldfield’s challenge.

After graduation from Tech, Harris worked as town clerk in Ironwood. She went on to work for developers of affordable housing and served as a consultant to NeighborWorks America, a nonprofit that helps low-income people acquire and rehab homes of their own.

Now she’s “retired” and living in Olympia, Wash., working actively as an international consultant. “Retirement sounds so dismal to me,” she explains.

“My Dad made minimum wage, and my mother never worked outside our home,” Harris points out. “I once thought, if I ever make $50,000 a year, I’ll be rich. I broke that glass ceiling, and then I thought, if I ever make $100,000 a year, I’ll really have done something, I did that too.”

She swears one thing made all the rest possible: “that four-year degree from Michigan Tech.”

Michigan Tech deliberately develops degrees that employers want, providing an education for the changing technological workplace. “Using census and employer survey data, USA Today made a list of the majors that are most likely to lead to the highest earnings for 2015 college graduates,” says John Lehman, associate vice president for enrollment, marketing, and communications. Those majors are engineering, math and science, business, agriculture, and natural resources. “That list closely mirrors the degree offerings at Michigan Tech,” Lehman points out.

Also, Tech students are hard workers at an institution known for its rigorous education, he says. As President Glenn Mroz recently told state legislators, “They know about bootstraps.”
Kailey Feuerstein ’15 certainly knows about bootstraps. She grew up in Grand Rapids, daughter of parents who both recently lost their jobs. “My parents were in the same situation as their parents were; they just didn’t have the money to go to college,” she says.

Her parents promised to help Feuerstein and her sister with their first two years of college, but she knew they couldn’t afford to send her to a university, so she enrolled at Grand Rapids Community College.

There she heard about a program that helps economically disadvantaged and first-generation college students successfully transition to a university. The Michigan College and University Partnership (MiCUP) is a collaboration between Michigan Tech and three community colleges. Feuerstein applied—and didn’t get in. But at the last minute, she got the call that changed her life: a space had opened in MiCUP.

So she headed for Houghton and never looked back. In fact, she barely went back; in three years at Michigan Tech, Feuerstein has never gone home for the summer. Instead she stays on the campus she has come to love and works to help pay her next semester’s bills.

There’s almost nothing a Tech student can do that she hasn’t done. She’s been president and vice president of Keweenaw Pride, vice president of the Women’s Leadership Council, and a resident assistant for the First Year Experience Hall, where 75 first-year students live. “I love them,” she says. “It’s fun to see them learning what it’s like at college. I’m so proud of them for trying new things.”

Feuerstein graduated in May, with her parents, relatives, and friends watching live via streaming video on a computer she set up for them at home. This summer, she’ll stay to mentor a new generation of MiCUP transfer students, working as the MiCUP summer student coordinator. “MiCUP helped me so much,” she says. “Now I can help them get started right.”

“I can’t believe how much I’ve changed in three years,” Feuerstein reflects. “When I was applying for college, I was thinking, ‘I’ll never get in.’ Now I’m applying for grad school, and I know I’ll get in.”
HOW WELL DO YOU KNOW ALUMNI REUNION?

Class is back in session! Our new Tech Trivia feature tests your knowledge about Huskies history and iconic University events. So, how well do you know your school?

Take our pop quiz and find out. (#2 pencils not required.)
Michigan Tech’s Alumni Reunion. You receive info in the mail about it every year. You’ve seen buzz about it on Facebook. Maybe you’ve even attended. But how well do you really know this annual Tech event? Whether you’re a Reunion newbie or an annual attendee, our Tech Trivia pop quiz will put your knowledge to the test. Ready to find out if you’re an Alumni Reunion all-star?

1. On average, how many people attend Michigan Tech Alumni Reunion each year?
   A. 100
   B. 250
   C. 500
   D. 1,000

2. True or false: You must be a Michigan Tech alumnus or alumna to attend Reunion.
   A. True
   B. False

3. What is the most popular local tradition for visiting alumni?
   A. Pizza at the Ambassador
   B. A trip out to Breakers
   C. Touring campus
   D. A drive up Brockway Mountain

4. Which event has been going on the longest?
   A. Winter Carnival
   B. Alumni Reunion

5. What is a Golden M?
   A. An alumna or alumnus who graduated at least fifty years ago
   B. A popular song played by the Michigan Tech Pep Band
   C. The winner of the student–alumni hockey tournament
   D. The KBC’s newest brew

Continue to next page for questions 6-10.
6. How many pounds of potatoes does Michigan Tech’s executive chef use in making the pasties for the famed Alumni Reunion Pasty Picnic?
A. 75
B. 150
C. 225
D. 300

7. True or false: It has snowed during an Alumni Reunion.
A. True
B. False

8. Which activity has not been featured during Alumni Reunion?
A. Fish dissection exercise for children
B. Surfing competition on Lake Superior
C. Gospel music showcase
D. High-ropes challenge course

9. One of the favorite foods at Reunion is pickled eggs. To achieve the perfect pickling, how long should a hard-boiled egg brine?
A. 8 hours
B. 1 day
C. 3–4 days
D. 5–7 days

10. True or false: You plan to attend Alumni Reunion 2015.
A. True
B. False

Pasties, pickled eggs, and Husky hugs—hallmarks of Alumni Reunion.

www.mtu.edu/alumni/favorites/pasties/recipes/bruses.html
1. C
Approximately 500 people attend Alumni Reunion each August. Attendance is up in recent years, thanks to a number of new family-friendly events—kayaking, waterfall hikes, pasty-making workshops, kids’ science explorations, and more.

2. False
Spouses, children, and family of alumni are encouraged to attend as well!

3. A, B, C, and D
Sorry, we pulled a bit of trickery on this one. The answer is really all of the above—and then some. You can also add campfires at Mc lift State Park, campus athletic events, pickled eggs and drinks at the downtown bars, catching late-night Northern Lights (when they decide to appear)… the list goes on.

4. B
In August of 1911, graduates were called “Back to Houghton Town” to celebrate the twenty-fifth anniversary of their college, becoming the first official Alumni Reunion. Winter Carnival didn’t start until 1922.

5. A
Once you have been a Michigan Tech graduate for at least fifty years, you are named a Golden M and welcomed into the official club. The Golden M breakfast, held annually during Reunion, is known for being the most raucous of all the events.

6. B
Executive Chef Eric Karvonen uses upwards of 150 pounds of potatoes to produce the highly sought-after pasties for the Reunion picnic.

7. False
Yes, we’ve all heard tales of summer snow flurries at Tech. But according to official weather records, no snow has fallen during early August in Houghton since Reunion began.

8. B
Surfing does happen on the Big Lake, but never as part of Alumni Reunion. You can, however, tackle Michigan Tech’s high-ropes challenge course, hear unique musical performances, and send your kids down to the Great Lakes Research Center for hands-on science activities.

9. D
The famed B&B-style pickled egg recipe, submitted to the Alumni Association by Bruce Rossman ’81, calls for 5–7 days in the pickling brine—though he admits to sneaking in a “necessary taste test” a few days earlier than that.

10. The answer depends on you!
Michigan Tech’s Alumni Reunion is a lot of what you would expect—old friends and classmates, great stories, and Copper Country traditions. But there are also plenty of cool events you might not expect. Plan a trip up to see us and check it out—Reunion 2015 is August 6–8.

mtu.edu/alumni/reunion
From the turf and hardwood to the ice and snow, Michigan Tech Athletics turned in a season of triumph, accomplishment, and unparalleled Huskies spirit. Our players gave their all—pushing their teams forward; grabbing awards, accolades, and honors; and giving their fans countless reasons to jump up and cheer. We can’t wait to see what 2016 has in store.

**Football**

With a 9–1 regular season record, football went into the postseason ranked 18 in the nation. A heartbreaking 42–41 loss in the NCAA Super Region Quarterfinal brought the season to a close, but not before three players—Bruce Tebelman, Frank Vruwink, and Nelson Wienke—earned all-region honors.

**Men’s Basketball**

The year of NCAA selection show watch parties continued for men’s basketball as the Huskies, who finished the season 19–9, matched up with the No. 15-ranked Indianapolis in the regional quarters. Ben Stelzer earned All-America and Academic All-America honors and was named the Midwest Region Player of the Year.

**Soccer**

Tech fell to No. 11 Grand Valley State in the GLIAC tournament, but the season wasn’t over; earning a bid to the NCAA tournament as the 3 seed in the Midwest Region. Emily Morin and Jacqueline Mielke were both named all-region, and the team, in its fifth year of existence, finished 11–5–2.

**Women’s Basketball**

It has to be a good year when your record reads 28–3, and despite running into a red-hot Ashland team in the NCAAs, the hardware rolled in when they claimed the GLIAC regular season and tournament championships. Danielle Blake earned All-America honors.
Skiing
It was quite a haul on the snow this year, with Alice Flanders claiming an NCAA regional title, Ulrika Axelson and Deedra Irwin finishing 1–2 at the NCAA regionals classic race, and Haakon Hjelstuen and Axelson claiming CCSA sprint titles. Irwin and Tom Bye also qualified for World Juniors, competing in Almaty, Kazakhstan.

Hockey
The hockey Huskies announced their arrival on the national stage, claiming their first NCAA bid in 34 years. A tough OT loss to St Cloud State ended a glowing season where they were ranked No. 1 in the nation, racked up 29 wins, and Coach Pearson was named the College Hockey News Coach of the Year. Tanner Kero became one of the most decorated players in school history, being named All-America first team, WCHA Player of the Year, a Hobey Baker Award finalist, and a Senior CLASS Award finalist.
Jon and Jenn Riehl have seen it all. After traveling over 500,000 miles in one truly intrepid Dodge sedan, the adventurous Tech couple has completed a tour of all 3,108 counties in the lower forty-eight—and gained a new appreciation for the United States' geographies and cultures.

“What most people have when they're planning a trip is an understanding of how to get from point A to point B,” says Jon. “They want to go from here to there in the quickest time. But the shortest trip between two places is no fun.”

Jon, an engineering fundamentals lecturer and civil engineering PhD candidate, and his wife Jenn ’14, a forestry research scientist with a PhD in Forest Molecular Genetics and Biotechnology, have both had a penchant for adventure since childhood. Between visiting her family in Texas and his family on the East Coast, the couple realized they could easily check off a large number of counties if they took a new route each trip home.

“We had always wanted to get around the whole country, and we've always wondered what’s between here and there, no matter where we're going,” says Jenn.

The couple’s journey, which began in 2006, has taken them in surprising directions—enough so that they hope to pen a book about their adventures in the near future.

“We ultimately love going to a place with a preconceived notion and then having it get totally destroyed,” says Jon. “That happened a lot in the Midwest, actually. People think of it as just flat farms. But we've seen bluffs in Iowa. Agate fossil beds in western Nebraska. Beautiful wetlands all over. We never intentionally set out to get those experiences. But this trip has been all about the stuff we see along the way.”

Rest assured, the couple isn’t cutting corners by only venturing a mile into each county on the interstate. They drive back roads often and try to get out of their car to walk downtown as much as they can. “It’s not a trip until you've driven on a dirt road,” jokes Jenn.
The journey has helped the couple with their Michigan Tech duties, too. Jon says the motivation for his doctoral research on urban sprawl was based on their travels, and Jenn says she’s gotten a first-hand look at the nation’s incredibly varied forests and soils along the way.

So what’s next? The Riehls first plan to finish exploring Alaska and Hawaii and then move on to complete the same feat in Canada. With a few hundred thousand miles left, they’ll keep trucking along, happily enjoying the ride.
FROM THE ALUMNI ASSOCIATION

WINTER CARNIVAL HISTORY, NOW AVAILABLE ONLINE.

For its semicentennial, the 1965 edition of the annual Michigan Tech Lode Winter Carnival Pictorial has been digitized and uploaded to Digital Commons, an online repository for scholarly, academic, and creative works produced at Michigan Tech.

The 1965 pictorial joins a collection of several others hosted on Digital Commons, including editions from 1964, 1974, and 1989.

Visit digitalcommons.mtu.edu/wintercarnival to download pictorials and take part in Winter Carnival’s collective history. To view the full physical collection of Winter Carnival pictorials, stop by the Archives Reading Room on campus at the Van Pelt and Opie Library.
STUDENTS VS. ALUMNI: THE 2015 BROOMBALL CHAMPS ARE...

The Alumni-Student Broomball Invitational was held over the Winter Carnival weekend, with current students matching off against alumni to see who would take home the coveted Alumni Cup.

Alumni players from across the country traveled to campus to compete. All players—young and young-at-heart—enjoyed the new IRHC broomball trailer, which was sponsored in part by the Alumni Association.

After double-elimination playoff rounds, student team Big Bird triumphed over alumni team Troy to win the trophy. The Alumni Association offers our congratulations to both teams!

For more info on the tournament, visit www.mtu.edu/alumni/favorites/broomball.

The Rules Reign

When it comes to Michigan Tech broomball, everyone plays by the rules—including alumni. How well do you remember the guidelines for gameplay?

• All brooms must be corn with wooden handles
• Duct tape is the only foreign material allowed on a broom
• No “high sticking,” or raising the broom above the waist on any shot
• Elbowing, cross checking, charging, or intentionally obstructing play or throwing your broom will result in a two-minute penalty
• Teams are responsible for the behavior of their fans—no inappropriate or distasteful chants allowed!

From the IRHC–Michigan Tech Alumni Association 2014–2015 Alumni-Student Invitational Rulebook
PRIDE WITH BENEFITS

The Michigan Tech Alumni Association has joined forces with multiple companies to offer you exclusive benefits, services, and discount programs. There are too many to list here, but you can learn more at www.mtu.edu/alumni/benefits/nav-benefits.

1. Get a 5% discount on ASPCA pet health insurance

2. Earn points and show your spirit with a Tech Visa

3. A $50 SYP discount is available for each child and grandchild

4. Get an official license plate

From left to right: Darnishia Slade ’98, Jennifer Fuller ’12, Chelsea Nikula ’11, Kevin Manninen ’87, Randy Bal ’74, Karin VanDyke ’78, Scott MacInnes ’74, Jacque Smith ’85, John Sanregret ’91, Natasha Chopp ’06, Beth Hoy ’96, and Bob Richards ’77 (not pictured)

The Keweenaw Alumni Chapter is one of our oldest Alumni Chapters, and—given their location—they are our go-to group when we need an extra set of hands. They help to calm the nerves at the Orientation parents social and reminisce about the good old days with our alumni returning to the Keweenaw for Reunion.

They support a scholarship fund for local Michigan Tech students and organize a variety of events—from the Winter Carnival All-Nighter Chili Run to the St. Urho’s Day celebration at the KBC. This outstanding group of volunteers really does support our mission: Celebrating Traditions, Creating Connections.

You can find a list of our alumni events at www.mtu.edu/alumni as well as on our Michigan Tech Alumni Association Facebook Page.

@MICHIGANTECH INSTAGRAM

#research #warbler #ecology # blueskies #springfling # mtu
In memory of the men and women who served our country in war and in peace and later died as a result of their service. We honor and remember their sacrifice.

It’s the inscription on the Memorial Union Building’s War Memorial Wall, and—thanks to a recent update to the wall—it carries more impact and meaning than ever before.

Michigan Tech’s War Memorial Wall was built in 1952, naming those lost during both world wars and the Korean conflict. Last year, a Michigan Tech alumnus and Vietnam veteran proposed an update of the historic memorial to include alumni who gave their lives during the Vietnam War and subsequent conflicts. The project took shape, and volunteers began working to compare US Department of Defense casualty lists to Tech’s student and alumni records.

On Veterans’ Day 2014, a new companion wall was dedicated, listing thirteen students and alumni lost in Vietnam and Afghanistan. It’s an important tribute to the fallen heroes of Michigan Tech, the men and women who gave their lives fighting for our country.

To view the names, visit the Alumni Association’s virtual War Memorial Wall at www.mtu.edu/fallen-veterans.

YOUR SUPPORT MAKES US JUMP FOR JOY

Whether you’ve already made your 2014–15 Annual Fund gift or plan to soon, our students want to take a moment to deliver a heartfelt thank you! They know their Michigan Tech experience is impacted by your support.

TO MAKE YOUR GIFT

- go online to www.mtu.edu/giving and make a credit card gift, or
- call the Michigan Tech Fund at 906-487-2310 or 877-386-3688 (toll-free) to make a gift over the phone.
How did you wind up at Michigan Tech?

Because they were headed up here anyway for a holiday, my parents brought me along to visit the Copper Country for a week when I was in high school. The sort of cheesy-but-real truth is that at the end of the week, I didn’t want to go home.

Favorite moment as a student?

Just one?! There’s so much more to the student experience than just class, or student orgs, or friendships. Going to Tech is joining the pilot team of a crazy new science outreach program, and watching it take off like wildfire. It’s fighting to earn that elusive A in your favorite professor’s (notoriously hard) class, then enrolling in another to do it all over again. It’s waterfall hunting in late spring with your best friends, or snowshoeing in the silent woods for the first time. It’s the mischievous satisfaction in hearing that vuvuzelas are banned at events shortly after you were among the rabble-rousers who gave the blasted things out en masse.

What do you do here?

My job with the Center for Pre-College Outreach primarily involves coordinating our local College Access programs. The main project is GEAR UP—it’s a nationwide program that helps get students ready for whatever it is they want to do after high school. I also work to coordinate on-campus events like the Get WISE (Women in Science and Engineering) workshop for middle school girls. Once the academic year ends, I am heavily involved with a lot of the logistics for Summer Youth Programs—room reservations, hiring, communication with instructors, and more. In the crannies between these things, I help out with the Mind Trekkers roadshow.

Why is that important?

Our pre-college work is important because it gives young people an opportunity to explore STEM and potential careers early on. We want students to know that it’s all right to try new things—that’s why SYP is so hands-on, and why Mind Trekkers is run by friendly, energetic Tech students. It’s why GEAR UP brings students to visit college campuses rather than just talking about going to college. We think it really matters to get students involved so that they can see applications of concepts they have heard about, but might not understand.

Who inspires you the most?

I’m most inspired by passionate teachers (elementary teachers all the way up through college professors and beyond). Excellent teachers shape people’s lives by believing in us, caring about us, and most importantly challenging us.

What do you still want to do?

I’ve always known two things: I want to make somebody’s life better, and I never want to stop learning new things. I stumbled into outreach completely by accident, but it turns out that it enables me to do both of those things every day. Wherever I end up and whatever I am doing in five, ten, twenty years, I just hope that life keeps surprising me.

What will Michigan Tech be like in 25 years?

Michigan Tech in 25 years will still be crazy smart, and I think that it will continue to grow—both in terms of student numbers and in terms of new and renovated buildings and spaces.
1960s

Robert Sloat '65 (Chemical Engineering) was inducted into Michigan Tech’s Department of Chemical Engineering’s Distinguished Academy of Chemical Engineering in April 2013.

James A. Mitchell '65 (Chemistry) has again been selected by his peers for inclusion in the 21st Edition of Best Lawyers in America in the practice areas of Litigation—Intellectual Property Law and Patent and Trademark Law.

1970s

Tom Paschetto '77 (Forestry) is in his sixteenth year as project manager with Promosis, Inc. in Marblehead, MA, and is celebrating his one-year wedding anniversary with his wife, Wendy.

Michael Jenkins '74 (Civil Engineering) retired to Delton, MI, in December 2013 after thirty-one years with the Defense Logistics Agency.

William Hensel '75 (Forestry): “Because of my Tech education, I was fortunate to have a successful twenty-three-year professional forestry career with a large paper company based in Wisconsin. I served as chairman of the Society of American Foresters in 1987. I served in the military from 1968–1971. Upon returning to school, I earned a master’s degree from University of Idaho in timber harvesting. I especially want to share my gratitude for the late Dr. Gene Hesterberg. He was a fine leader and gentleman—the best! Today I am a PGA golf professional working in the Tampa area and enjoying keeping out of the trees—a change from my forestry career, which always kept me deep in the forest.”

Tim Foss ’75 (Forestry) retired from the US Forest Service after a thirty-nine-year career. He served as trails/wilderness/OHV manager; winter recreation supervisor; presale forester; and firefighter in both the Gifford Pinchot and Okanogan-Wenatchee National Forests. He and his wife, Hilary, live in Cle Elum, WA, where he remains active as a volunteer and musician.

1980s

Brian Wilczynski ’84 (Forestry) retired from the US Department of Defense on June 14, 2014, after twenty-eight years of service. He has relocated from the Washington, DC, area to Traverse City and is building a new home. He continues to work as an independent consultant to Department of Defense contractors in the DC area.

Douglas Pratt ’83 (Mechanical Engineering) retired from General Motors after more than thirty years of service in many different roles—development engineer, release engineer, materials engineer, and test engineer. He now volunteers his time with the Memphis, MI, fire department.

Tim Foss’75 (Forestry) retired from the US Forest Service after a thirty-nine-year career. He served as trails/wilderness/OHV manager; winter recreation supervisor; presale forester; and firefighter in both the Gifford Pinchot and Okanogan-Wenatchee National Forests. He and his wife, Hilary, live in Cle Elum, WA, where he remains active as a volunteer and musician.

William Cormack ’84 (Mechanical Engineering) and his wife of twenty-eight years, Maureen, are employed by the US Department of State overseas. Bill is a construction engineer who supervises the design and construction of US embassies and consulates and overseas housing for American diplomats and their families. He is currently assigned to the US Embassy in Islamabad, Pakistan. Maureen is a senior Foreign Service officer in the US Department of State’s Diplomatic Corps and is currently the ambassador of the United States to the Republic of Bosnia and Herzegovina. Maureen resides in Sarajevo. The Cormacks have three college-aged children and maintain their residence in Fairfax, VA.

Shawn ’82 (Computer Science) and Jim ’81 Rathbun (Civil Engineering) completed a cross-country bicycle ride from Washington to Maine in the summer of 2014. Read about their adventure at www.rathbike.com.

Peter Sajdak ’82 (Chemical Engineering) has held the award in his first year of eligibility.

Timothy Jenkins ’89 ’08 (Mechanical Engineering) received the Charles and Sue Ragan Gelet Excellence in Teaching Award in Engineering for the 2013–2014 academic year. Tim has been an assistant professor in Design Engineering Technology at Trine University in Angola, IN, since August 2012. He received the award in his first year of eligibility.

Rodney Tanner ’83 (Computer Science) began working as a computer analyst for Hormel Foods in Austin, MN, in March 2014.

Scott Stevens ’81 (Forestry): “After thirty-one years of federal law enforcement, I retired on May 31, 2014. I started working for the National Park Service as a law enforcement ranger in 1983, and after twenty years I switched over to the Bureau of Land Management for two years as a chief ranger. I finished the last nine years of my career with the US Fish and Wildlife Service as the regional law enforcement chief in the Pacific Southwest Regional Office.”

CLASS NOTES

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Jim Niemczyk '82 (Mechanical Engineering) has been promoted to president and general manager of American Panel Corporation (APC). Jim will be responsible for all business activities at APC, which is the world’s leading manufacturer of custom-designed display products for aviation, rugged ground vehicles, and shipboard applications. APC supplies cockpit displays for nearly every military aircraft in the US and NATO fleet as well as Abrams tanks and Stryker ground vehicles.

1990s

Scott Hudson '96 (Civil Engineering) has been named secretary for Committee 12—Rail Transit by the American Railway Engineering and Maintenance-of-Way Association (AREMA). This committee is responsible for the development and publication of information regarding light and heavy rail transit systems and their design, construction, and rehabilitation—in particular Chapter 12 of AREMA’s Manual for Railway Engineering.

Travis Brabec '98 (Environmental Engineering) and his wife, Kelly, welcomed baby girl Hailey in December 2014.

Christi (Chapman) Bellmore '99 (Biological Sciences) and Nick are thrilled to announce the birth of their son, Colton Nicholas, on January 11, 2014.

Matthew H. Meyer '98 (Metallurgical and Materials Engineering) is now the manager of the Chemical and Metallurgical Laboratory for the Kohler Company located in Kohler, WI. Matthew, Jennifer, and their four daughters live in Sheboygan.

Colleen (Tallman) Fitzgerald '96 '98 (Electrical Engineering) married Allan Fitzgerald on July 6, 2014, in Midland, MI. Colleen and Allan are currently living in Playa del Rey, CA.

Ann Kitalong-Will '96 '00 (Scientific and Technical Communication; Rhetoric and Technical Communication) and Cayce C. Will '98 (Computer Science) are happy to announce the birth of their third son, Logan Evert Kitalong Will. Logan was born on February 21, 2014.

Spencer Slade '97 '99 (Mathematics) and Britt (Forslund) Slade '01 '04 (Mathematics) announce the birth of their daughter; Elsa Susia, on June 6, 2014. She joins her big brother, Eli Anders.

2000s

Curt '03 (Mechanical Engineering Technology) and Janelle (Meyer) Trowhill

Gretchen and Eric Dalquist '04 (Computer Science) welcomed their son, Hendrik Lloyd Dalquist, on June 22, 2014. Hendrik was 9 pounds, 12 ounces, and 22.5 inches long. His older sister Elsa is very excited to have a baby brother.

Andrea Dreyer Zuehlk '01 '04 (Mechanical Engineering) and Matt Zuehlk are proud to announce the birth of their son, Max Bennett Zuehlk, on August 12, 2014. Big brother Evan is excited to show him the ropes.

Christopher Occhipinti '04 (Physics) and Ariana Jeske '05 (Civil Engineering) belatedly announce the arrival of their daughter, Aurora Julia Occhipinti, born December 3, 2013, in Grand Rapids, MI. The family lives in Sparta, MI. Christopher is employed by NTH Consultants, Inc. of Grand Rapids and Ariana is employed with Prein & Newhof of Grand Rapids.

Veronica (Rozmiarek) Bloom '05 (Mathematics) and Gedare Bloom '05 (Computer Science and Mathematics) announce the birth of Linnea Valerie Bloom, August 23, 2014. Linnea joins big sister Annalise.

Brian Edwards '08 (Chemical Engineering) and Jillian Schubert Edwards '09 '11 (Applied Ecology and Environmental Science; Environmental Policy) welcomed their son, August Xavier Edwards, on February 26, 2015, at 10:38 A.M. August was 7 pounds, 15 ounces, and 21 inches long.

Michelle (Manarolla) Ford '01 '05 (Applied Ecology and Environmental Science; Applied Ecology) and Kevin Ford '04 (Mechanical Engineering), along with their son Holden, welcomed the birth of Brooks Andrew Ford on January 19, 2015. Brooks weighed 9 pounds, 13 ounces, was 21 inches long, and was born in Middletown, CT.

Paul Brandes '04 (Geology): “In 2014, I was named Employee of the Year (also known as the MVP Award) at the Texas Commission on Environmental Quality Region 12 Office here in Houston. The
Ted Reuschel ’64 spent ten years following his thirty-seven-year career with the Michigan DNR gathering and organizing material about trees to draft his book—an in-depth yet easy-reading review of ancient uses of trees and wood. In it, Reuschel writes about some of the most unusual trees in the world, focusing on the ancient “cradle of civilization” to see how trees were cut, moved, and fashioned into useful products. He talks about the famous cedars of Lebanon and the earliest use, abuse, protection, and management of Mediterranean-area forests. Reuschel’s book is available for purchase at www.amazon.com.

Roxane Gay ’09 (Rhetoric and Technical Communication) wrote and published a book, Bad Feminist, which made The Atlantic’s “The Best Book I Read This Year” list.

Melissa (Beutler) DeLuka ’00 (Mechanical Engineering) has been elected to the Alpha Phi Omega National Service Fraternity Board of Directors for a two-year term, 2015–16. She serves as the membership and extension program director; Melissa and her husband, Michael ’00 (Chemical Engineering), joined the Alpha Phi Omega-Epsilon Lambda Chapter at Michigan Tech in 1997.

Brian Thompson ’11 (Electrical Engineering) and Jessica Thoresen ’12 (Biological Sciences) were married on June 21, 2014, in Lansing.

Scott Nelson ’10 (Materials Science and Engineering) and Megan Knudstrup ’10 (Civil Engineering) were married in Carmel, IN, on October 4, 2014. Scott and Megan met as members of the Huskies Pep Band and were both heavily involved in the band throughout their time at Tech.

Nick Laurila ’10 (Business Administration) won a gold medal with the US-Women’s National U-18 team as the video coordinator.

Anthony Doering ’07 ’10 (Biomedical Engineering: Mechanical Engineering) welcomed their third child, Elijah, on August 1, 2014. Big brother Blake and big sister Addison are excited to have a baby brother.

Stephanie (Garbacik) Sullivan ’10 (Environmental Engineering) and Mike Sullivan were married on May 31, 2014, and are looking forward to celebrating their one-year anniversary in Kauai.

Whitney Petersen ’08 (Business Administration) and Todd McIntosh ’12 (alumni, non-degree) were married on June 7, 2014.

Andrea Walvatne ’12 (Mechanical Engineering) and Kristopher Falasco ’13 (Chemical Engineering) met in the Pep Band and Wind Symphony. Their Tech-themed October 18, 2014, wedding included many fellow Tech grads. They entered to the Pep Band entrance song and guests enjoyed pasties and KBC beverages. Even their wedding bands are rose gold—a mixture of copper and gold, to reflect the Copper Country.

Robert Green ’06 (Civil Engineering) and wife Tanya welcomed their first child, a baby boy, on November 26, 2014. Matthew Robert Green weighed 9 pounds, 9 ounces, and was 20.75 inches long.

Angela Elizabeth Hoffman ’11 (Psychology) and Benjamin James Bouman ’10 (Biomedical Engineering) were engaged in September 2014. They currently reside in Ann Arbor and plan to celebrate their marriage in June of 2015.

Jen Zarzecki-Lundin ’13 (Mechanical Engineering) married Peter Lundin ’12 (Electrical Engineering) on October 4, 2014, in Grand Rapids. Jen and Peter are engineers at John Deere. The two reside in Waterloo, IA, with their corgi, Ellie.

Thomas ’12 (Mechanical Engineering) and Allison (Kapala) Stutts ’12 (Mathematics) were married on August 2. Allison is an actuarial analyst at Mercer; and Tom is a design engineer at General Electric Company. They reside in Louisville, KY, with their chocolate lab, Euler.

2010s

On August 30, 2014, Brittany Kelly ’09 (Mathematics, Delta Zeta sorority) and Matthew Osborne ’09 (Industrial Technology, Sigma Phi Epsilon fraternity) were engaged. They will be married in June of 2015.
IN MEMORIAM

This April, Michigan Tech’s School of Business and Economics (SBE) and the Applied Portfolio Management Program (APMP) held a ceremony to remember and honor the late James Trethewey ’67.

Throughout his career, Trethewey never forgot his alma mater; serving on the Advisory Board for the SBE, University President Glenn Mroz reflected on the importance of family to Jim—a family that included his wife, children, and grandchildren, as well as his Michigan Tech family.

SBE Dean Gene Klippel highlighted Jim’s willingness to serve Tech and the School in a variety of roles.

“The wording on the plaque to honor Jim reflected his philosophy—‘Make it a great day,’” says Dean Johnson, the James and Delores Trethewey Professor in the School of Business and Economics.

“Jim was always smiling, always upbeat, and he encouraged all of us, faculty and students, to conduct ourselves that way,” Johnson says the plaque will be placed in the Trading Room “as a reminder to APMP students of their responsibility to not only improve themselves each day but to make a positive impact in the lives of others around them.”

1939 Thomas H. Ginsburg
1940 Gervase G. Strucel
1941 Col. Lawrence B. Farnum (Ret.) Floyd H. Lee
1942 John C. DeBoer, PE
1943 Edwin R. Knox Jr.
1944 Robert M. Aslin
1946 Gordon E. Hoyem Dorothy H. McNaughton Wayman L. Rossman Theodore C. Williams
1947 Robert G. Coffey Peter J. Crescenzo William M. Goudey Willard James Stronks
1948 Stanley Dacko Edward J. Faber George H. McKenzie Harry R. Nye Frederic D. Seaman
1949 Dr. Rodger H. Chapman Robert I. Clevenstine Raymond J. Donley William N. Flaa Theodore J. Harris PE RLS
1951 Herbert W. Henry Michael Serafin
1953 Ludolph Albers Wendell C. Buckland Prof. George R. Butler Lt.Col. Lauri F. Parssinen (Ret.)
1954 John F. Ahrens Gary J. Babcock
1955 Dean J. Campbell Robert T. Larsen Capt. Albert R. Socha USN (Ret.)
1957 Gerald C. Byrd Carl G. Johnson Mervyn F. E. Lavigne David A. Richardson Lt.Col. Edgar R. Whitney (Ret.)
1959 James S. Collins James M. Kramer Dr. N.A. Matwiyoff C. Ted Nelson Thomas C. Pechauer Dr. Robert J. Sigsby Douglas M. Waisenan
1962 June A. Collins Richard H. Kirk Richard L. Lappo Carl W. Miller
1963 William R. Haukkala Jane E. Job Douglas J. Kivisto Sandford T. Waddell
1965 Thomas B. Bouwhuis Roger J. LaMothe Lawrence A. Laurich James J. Rooney
1966 Frederick E. Dauser Jr.
1967 Melvin M. Tabar
1968 Donald E. Hill Linda J. Horton
1969 David J. Priniski John V. Viquist
1971 Robert J. Farrell Francis R. Garey Paul R. Jestila Chester G. Weeks
1972 Timothy J. O’Keefe Douglas D. Rappley
1973 John E. Force
1974 Bruce M. Lange James H. Moore Remo J. Tonelli George F. Twardzik
1975 Steven LaRouche Marcia G. Nichols
1976 Paul C. Lemin Melvin G. McCue Catherine A. Riley-Hall
1977 Peter P. DeVere Gregory M. Hall Peter W. Kimmes Charles Swan II Dr. James P. VanWagner
1978 Mary E. Hulkonen Elaine M. Kilpela Michael E. Kostamo David W. London
1979 James E. Austin Jerry R. Biehl Craig R. Prudian
1980 Jeffrey A. Davis Peter K. Jensen Patrick J. Sizemore Barbara J. Whitman
1981 Michael J. Lulich Dr. Thomas J. Michaud
1982 Edward C. McCullah
1983 Thomas E. Gosz Rita J. Ravenna Timothy G. Tibbott
1984 Matthew F. Nitschke Steven P. Wolfe
1985 Jeffrey A. Desjarlais
1986 Jeffrey L. Burhans William A. Isaacson
1987 Lisa A. Holmstrom Mark V. Lee Hans B. Leese
1988 Jonathan D. Godfried
1991 Anthony J. Stokes
1992 Bruce C. Anderson Craig R. Sysma Theresia L. Whitman
1995 Roderick E. Korhorn Clarence R. Schaaf
1998 Andrew T. Ehrensing
2002 Paul J. Inman
2003 Nicholas J. Berkebile
2004 Beverly A. Smith
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AUGUST 5–8, 2015
Keweenaw Science and Engineering Festival, Houghton, MI
www.keweenawscience.org

SEPT. 25–26, 2015
Dow Great Lakes Bay Regional STEM Festival, Delta College, MI

OCTOBER 9–10, 2015
Southeast Michigan Science and Engineering Festival at Schoolcraft College, Livonia, MI

OCTOBER 23–24, 2015
Iron Range STEM Showcase, Iron Range, MN

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Twenty-two veterans end their lives every day, a number Justin Fitch is determined to see fall to zero. Carry the Fallen’s ruck marches raise awareness and funds for the cause—and the twenty-two-mile march carries the symbolism of their fallen brothers and sisters.