

# Mic igan Tec

2015 • VOLUME 52 NUMBER 2

M A G A Z I N E

## THE STUDENT INNOVATORS

THEY'RE GROWING NANOTUBE  
FORESTS, DECODING TREE  
ROOTS, DISCOVERING  
MACROMOLECULES—AND  
CHANGING THE WORLD.

RESEARCH  
REVOLUTION

# “Look up.”

By all measures, it has been an epic summer for Keweenaw stargazers and Aurora spotters. But the best show came on the night of August 12, when the Perseids overlapped with the Delta Aquarids just as the Northern Lights began to bloom. The result? A spectacular night sky radiating violet light and speckled with meteors. Shine on, Keweenaw.







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Published by University Marketing and Communications

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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.



### ▲ **On the cover**

Graduate student Mahsa Asgarisabet was recently recognized by SAE International for her work on carbon nanotube speakers

# Tech On TOP

If it seems like Michigan Tech has been in the news more lately, it's not your imagination. The University and its home, the Keweenaw Peninsula, have been grabbing headlines and garnering accolades. We think the

rest of the world is simply catching on to what we've known all along: that Tech is the best damn school in the country. Can you feel the love?

## ▶ Best Small-College Town



**Michigan Tech** was named one of America's best small-town colleges by BestColleges.com. The ranking was based on acceptance, retention, graduation, and enrollment rates. "Can you imagine Michigan Tech in any other city in the country? I can't," said John Lehman, associate vice president of enrollment,

marketing, and communications. "For the students studying with us, our location in the wonderful community of Houghton and the Keweenaw perfectly complements the outstanding education they receive."

## Most Livable City

**The city of Houghton** was one of only three cities in Michigan (and the only in the Upper Peninsula) to be named among the top 100 most livable small towns in America by livability.com. Houghton was credited for having a year-round tourist season, affordable housing, good job availability, and a location centered in the heart of the Western UP.

## A Princeton Review "Best Of"

**Princeton Review's 2016** issue of *The Best 380 Colleges* ranks Michigan Tech among the best Midwestern colleges and green colleges nationwide. "Every college in our book has outstanding academics," said Robert Franek, senior vice president and publisher of the *Best Colleges* guide. "Our lists provide direct student feedback that can give students a new way to see the types of colleges that could help them achieve their goals and dreams."

## Trail Biking Destination



**The Lansing State Journal** has declared Copper Harbor a world-class mountain biking destination. "Trails with names like "Flying Squirrel," "Stairway to Heaven," and "Flow" crisscross the landscape," the author writes. "With berms, built-up boardwalks, and hair-pin turns, these are quickly becoming known as some of the best trails in the world. Mountain bikers are flocking to Michigan's Upper Peninsula to experience them."



▶ [WWW.COPPERHARBORTRAILS.ORG](http://WWW.COPPERHARBORTRAILS.ORG)



# Winning on Wall Street

**It's been said** the only thing more difficult than winning a championship is repeating. That is exactly what an Applied Portfolio Management Program (APMP) team from Michigan Tech has done.

For the second year in a row, the School of Business and Economics' APMP team won the global investment competition at the Global Asset Management Education (GAME) Forum V, hosted by Quinnipiac University in New York City. The event, held March 19–21, attracted more than 1,200 students from 140 colleges in 40 countries and 39 states.

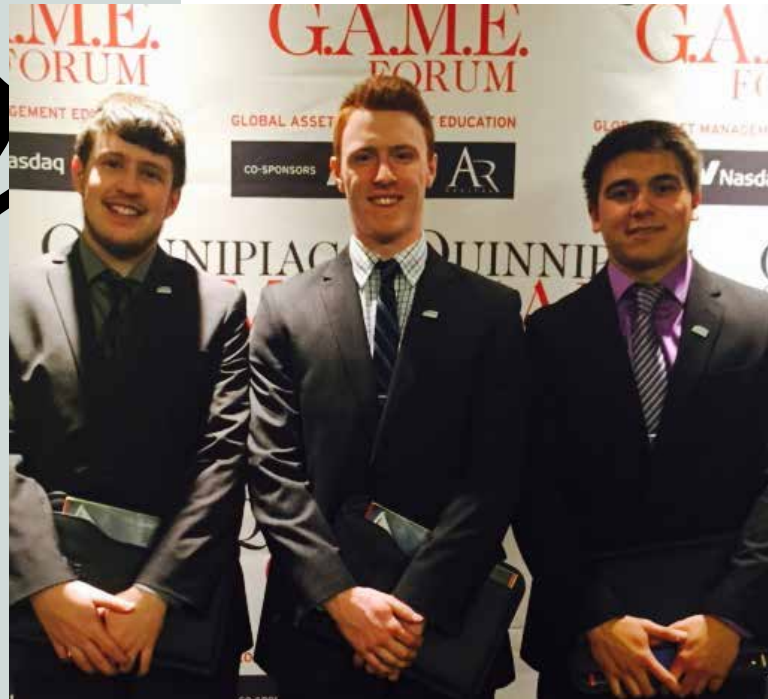
The APMP sent three students to the competition: Cory Sullivan, who participated in the NASDAQ closing ceremony, Heath Johnson, and Derek Menard.

The results of the team's investments were impressive, according to Dean Johnson, James and Dolores Tretheway Professor in the School of Business and Economics and the APMP's founding director. He says what sets the competition apart is the fact that students are investing real money—a lot of real money.



"The team manages \$1 million through the Michigan Tech Fund," Johnson explains. "These funds were explicitly donated to be managed by the students." Heath Johnson, the only returning member from last year's winning team, says that while there was a sense of pressure to repeat, the experience of having done it before was beneficial.

"After experiencing the competition last year I knew that we had to be mindful not only of our returns, but also the risk subjected to our portfolio," he says. "Our team really wanted to repeat last year's impressive performance. Winning two years in a row out of 141 schools was incredibly exciting. We were able to outperform the market through very consistent returns while minimizing risk."



- ▲ GAME winners: Tech's APMP team took top honors at the Global Asset Management Education summit
- ◀ Cory Sullivan closes the NASDAQ

# Tackle the Husky Bucket List



◀ Hike Brockway Mountain Summit, Copper Harbor

Treetop views and fresh, cool air make the workout worth it

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## DO IT



Ready to make some Michigan Tech memories? Download the full list at [mtu.edu/giving/partners/current/bucketlist](http://mtu.edu/giving/partners/current/bucketlist)



Share your photos online using [#huskybucketlist](https://twitter.com/huskybucketlist)

**You attended class**, studied hard, and graduated. But how many quintessential Michigan Tech traditions did you experience?

Find out, and get involved, by tackling Tech's new Husky Bucket List. It's a collection of the 85 must-have moments every Husky needs to experience while attending (or visiting) Tech. How many have you done?



◀ Take a sauna

The perfect end to a traditional sauna is a dip in chilly Lake Superior





◀ **Play Broomball**

The duct-taped-broom sport is a legend at Tech



▶ **Put your toes in at Prince's Point**

Then, have a campfire and s'mores with friends



◀ **Try a pickled egg**

Bold, briny, and perfect with a beer



◀ **Walk in the Parade of Nations**

Afterward, eat back your calories at the international food festival



**Enjoy Mont Ripley**

The view of Tech and the Keweenaw Waterway is unbeatable

# Survey Says...

More than 400 surveys were sent to corporate representatives who attended the University's spring Career Fair. The results are in—and they're impressive.



▲ Career FEST includes employer and student networking opportunities, mock interview sessions, résumé assistance, Industry Days, and the Career Fair



Students receive résumé assistance and interview skills prep from Career Services prior to the Career Fairs

**73%**

feel that our students possess written and verbal skills

**73%**

say that Tech students could work well in teams

**87%**

of respondents believe that Michigan Tech students exhibit critical/analytical skills



**80%**

think that our students are creative and innovative problem solvers who have the ability to solve and analyze complex problems

Recruiters from top companies and organizations attend Michigan Tech's Career Fairs, including Ford, Google, Caterpillar, 3M, and more



CONVO ▾

# Overheard On Social Media



facebook

July 23 @ 7:30 AM

Captured from our webcam atop the GLRC!  
[www.mtu.edu/webcams](http://www.mtu.edu/webcams)

**David Allen**

Hey, the snow's finally gone!

**Neelam Chopade**

Please try taking another one from exact same spot during fall. It would be really nice to see colorful view of same pic :)

**Doda Guyer**

Another beautiful day in the Keweenaw!

**Suzanne Houle**

Looks like it is going to be a HOT day in the CC. CC hot I mean! :)

**Patti Miller Surran**

Love the rainbow :)

**Amanda Sharpe**

I was just thinking the same thing.

**Deborah Eldred Urban**

Awesome!



452 Likes



## ▶ UPLODE

A student's-eye view from the *Michigan Tech Lode*

**"The Society of Intellectual Sisters' Bra Show is full of educational moments, but doesn't bog the audience down with relentless facts and figures or sad stories."**

Alexandria VanDuzer gives the annual Bra Show two thumbs up.

**"Glenn Mroz is the president of a large university, and Douglass Houghton hasn't made any significant contributions to society since the early to mid 1800s."**

Tom Aito suggests that the city of Houghton will be renamed Mrozville, in the *Lode's* annual satirical edition, the *Michigan Tech Lewd*.

**"Sometimes reading a book only makes a headache worse. Reading isn't the right choice for everyone, and that's okay."**

Joseph Pietrzyk doesn't always see the need to read.

**"The inaugural snoccer tournament was held at Tech. Teams were comprised of five players; the winning team was the Snocc'em Boppers."**

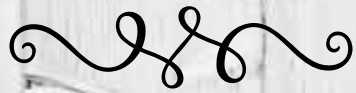
John Reynolds on Tech's newest Spring Fling sport.

**"From here on out, whenever I hand someone my résum , the first heading will read 'Previous Internship Experience,' and that will give me a huge advantage when talking with companies."**

Rand Silvers, excited to begin his first paid summer internship.

**"Whoever you are, whatever you are doing, peace out."**

Andrea Spencer says goodbye to readers on the eve of summer break.

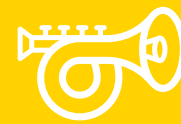


**SOMETHING BORROWED,**

# Something Blizzard







**Husky couples are following a new wedding trend: making Michigan Tech a part of their nuptials.**

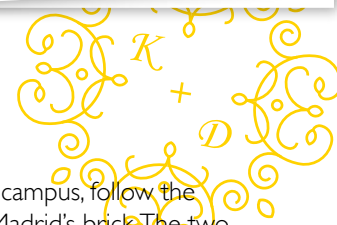


**Andrea (Walvatne) '12  
and Kristopher Falasco '13**

Music (and love) was in the air when Andrea, who plays clarinet, and Kris, who plays saxophone and oboe, met in the Michigan Tech Wind Symphony. When they married in Wausau, Wisconsin, the couple infused their home state with Michigan Tech pride. "We served pasties and KBC beer, and our grand entrance song was "2001," the same song the Pep Band plays every game." Paying homage to their beloved Copper Country, Andrea and Kris's wedding bands are even made of copper.



**Kaylee (Walsh) '12  
and Daniel Madrid '10**



When you spot "Bronze Blizzard" on campus, follow the engraved pavers to Kaylee and Dan Madrid's brick. The two first met during Grilled Cheese Night in East McNair and have been writing their Husky romance ever since. Step one: get engaged during Winter Carnival. Then, after the wedding ceremony, round up your fellow Huskies for the quintessential group shot, accompanied by a rendition of "In Heaven, There is No Beer." The perfect gift for said Husky honeymooners? Custom granite with the Michigan Tech logo. When they are settled into their new Ann Arbor home, Dan says that they plan to host—what else—but a grilled cheese housewarming soirée. Swoon.





## Lindsey (Licht) '12 and Tyler Losinski '13

The tricky thing about being the school mascot? No one can know—even when you're required to dress as a giant, stuffed husky. So when the time came for Tyler, who worked as Tech's mascot, Blizzard T. Husky, to propose to girlfriend Lindsey, who worked in the Admissions Office, he had just the idea. "Lindsey always wanted the proposal to be a surprise," Tyler says.

On the eve of graduation, and with the impending arrival of both of their families, Tyler devised a plan to propose to Lindsey on her last day with Admissions. The stage was set: Tyler's roommates were ready with a camera, Director

of Admissions Allison Carter gave the green light, and Tyler donned a tie—over his Blizzard get-up. "I got down on one knee, took the head off, and proposed. Not even my roommates knew I was Blizzard," Tyler says. That evening, Lindsey and Tyler celebrated with family before jetting off on a two-month trip around the US.

Tyler has something up his sleeve for the couple's upcoming wedding anniversary. "There will be a surprise involved, for sure. Our relationship is fun, adventurous, and exciting."



## Bethlyn (McCallum) '08 and David Cummings

For a woman whose bedroom is painted gold and black, it is only fitting that Tech reigns supreme as the wedding theme—Tech hockey, to be exact. Former Mitch's Misfits president Bethlyn and David were wed on August 10, 2013, in the

student section of the John MacInnes Ice Arena. "The Pep Band played the 'Star Spangled Banner,' guests wore hockey jerseys, and the Zamboni was our backdrop," Bethlyn recalls. After the ceremony, guests laced up to skate with the newlyweds.





## Katy Hickey '13, '14 and Henry Schmidt '14

For Katy and Henry, who met in a Mechanics of Materials class in fall 2011, the iconic ME-EM building was the perfect setting for the couple's engagement photos. Henry, who now works for Tech as a research engineer, coordinated reserving the classroom for the shoot. "We

put a lot of thought into how we wanted our photos to look and feel," Katy says. Henry adds, "I can recall many nights of Katy studying while I was in the lab building engines until the wee hours. Now we have these great photos in the place where it all began."



## Lyndsey (Marino) '09 and Eric Baum '09

Few colleges can tout a ski hill. Even fewer grads can say they married on one. But then, Lyndsey and Eric are not your average Michigan Tech grads. The fitness buffs were married just above "The

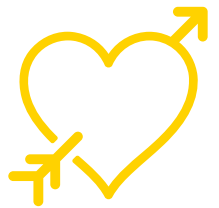
Plunge" in June 2013. As part of the festivities, the couple hosted a 5k run, inviting all 70 guests to participate.



## Liz (Cloos) '12 and Patrick Dreyer '12

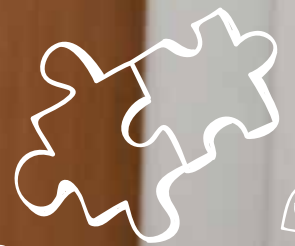
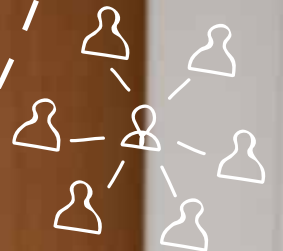
Liz and Patrick fell in love before classes even started. The pair hit it off over card games during LeaderShape, Tech's intensive weeklong leadership development institute at the Ford Center in Alberta. Both musicians, Patrick went on to join the Pep Band and the couple

participated in dozens of band events together. When they wed in June 2014, the Pep Band serenaded them with "You are My Sunshine" during the reception.



# What Can You Do With a Bachelor's In Psychology?

Krista Knight uses her Tech psychology degree for behavioral-based interviewing



Resume



I LOVE MY WORK

HUMAN RESOURCES

I LOVE MY JOB



A JOB YOU LOVE







A lot, it turns out—and it's more than couches and counseling sessions. Michigan Tech students and alums prove that a successful career can be just a bachelor's degree away.

◀ Corey LaBissoniere gets plenty of mileage out of his Michigan Tech psychology degree, as a foster care and adoption worker at UP Kids in Houghton, and as an author of young adult fantasy novels

## Of the 72 undergraduate degree programs available at Michigan Tech, perhaps none is more misunderstood than Psychology.

Susan Amato-Henderson, chair of the Department of Cognitive and Learning Sciences, says the problem begins with the definition of the subject itself.

"People don't know what psychology is," Amato-Henderson says. "Educating our students, and others, is a battle."

Amato-Henderson says one of those battles involves stereotypes. "When you say the word 'psychology,' people tend to conjure up images of patients on chaise lounges confessing feelings about their parents. But psychology is much broader than just therapy."

Another common misperception is the idea that there are no career options for students pursuing a bachelor's degree in psychology, and that graduate school is the only option. On the contrary, says Amato-Henderson: Tech's placement rate is quite



◀ Dr. Susan Amato-Henderson is chair of Michigan Tech's Department of Cognitive and Learning Sciences

***"People don't know what psychology is; educating our students, and others, is a battle."***

**Susan Amato-Henderson**

impressive, with students finding employment in a variety of fields, both in and out of the traditional definition of psychology. She says this particular misconception goes back to a misunderstanding of what psychology is and what careers in the field really entail.

"The way I've heard it put best is, 'psychology is about saving minutes, money, and life.'"

Saving minutes and money are at the forefront of the human resources field, where alumna Krista Knight is finding her bachelor's degree in psychology from Tech useful every day.

"I can say without a doubt that my degree helped me land my first job and continues to play a valuable role," she says.

Following her graduation, Knight interviewed for an administrative assistant position at a biosciences firm in Ann Arbor. During the interview process, she mentioned how a psych class at Tech triggered an interest in HR and a desire to eventually get into the field. After working with HR personnel, Knight was promoted to a contract HR assistant in just a few months. Later, she worked as an HR representative for a staffing company in the Detroit area. "While this job wasn't exactly what I wanted, it did introduce me to the concept of behavioral interviewing," Knight says.

As her career progressed, she began to narrow her focus in an effort to make better use of her psych degree. She began to seek more recruitment-intensive positions and returned to Ann Arbor for a job that primarily involved scheduling, conducting interviews, and "working with the HR manager to create an acceptable list of behavioral-based interview questions and orientations."

Knight says every positive career step was made possible by her undergraduate education.

Amato-Henderson says that the array of classes and diversity of skill amongst faculty members make a degree in psychology extremely flexible and invaluable in a variety of professions and occupations.

Corey LaBissoniere has always been fascinated with psychology. "I loved the idea of studying people's behaviors; finding out why people are who they are and why they do what they do."

He also had a passion for writing. About ten years ago, while working on what would become his first book, he learned that Michigan Tech had a psychology major and felt it was the perfect opportunity to meld his two passions.

"I jumped into action and decided to go to Tech," he



says. "Writing the book was still on my mind then, but I had a passion for psychology."

He says studying psychology helped his writing—"more or less sparking ideas"—but still, he had a hunger for the subject.

Armed with his bachelor's in psychology and a job in the social services field, LaBissoniere dove into writing. "It is a lot of fun, especially when I get into the all-night writing sprees where the story just flows," he says.

Ten years of these sprees led to the publication of LaBissoniere's first novel, a middle grades/young adult fantasy novel, *Land of Enchantas*. The sequel, *Return to Enchantas*, is expected to be released shortly. "I decided to write fantasy because I enjoyed reading those types of books during my childhood," he says.

**"The way I've heard it put best is, 'psychology is about saving minutes, money, and life.'"**

**Susan Amato-Henderson**

LaBissoniere says that for a first novel, *Land of Enchantas* has done well, with more than a 1,000 copies sold and "still going." His studies have inspired him to pursue other types of writing as well. "I also have ideas in mind for science fiction, children's books, and even comic books that I hope to write some day."

Not only has the psychology degree helped with LaBissoniere's writing, but it led him to his day job as well, as foster care worker, adoption worker, and post-adoption worker with U.P. Kids of Houghton. "I hold a few different positions," he says. "My psych degree, as well as my minor in social and behavioral studies, fits perfectly here."

Amato-Henderson says that Knight's and LaBissoniere's stories are just two of the many psychology success stories.

"While it's true that a number of our graduates go on to pursue their education in graduate school, many find rewarding occupations with their bachelor's degree."

**85%**

Tech's placement rate is quite impressive, with students finding employment in a variety of fields, both in and out of the traditional definition of psychology.



*Land of Enchantas*, a young-adult fantasy, is the first novel by alumnus Corey LaBissoniere



# 906 Callers

**Who's on the other end of those Michigan Tech phone calls? The answer may surprise you. (Hint: it's not just about updating records and collecting money.)**

**"Hello, this is Chris calling from Michigan Tech, how are you this evening?"**

A phone call might seem kind of old-school in this click-here-now world. The rigmarole of daily life seldom permits time for an unplanned call from a stranger. And yet, Michigan Tech's student development officers are hardly strangers.

For student Tech Line callers, phoning home to Michigan Tech alumni and friends is their after-

school job. Except unlike foaming lattes or slinging pizza, Tech Line connects them to a great big world—past and present.

"We tell alumni about campus news, and they tell us about themselves," says student caller Alissa Alexander. "Their really cool jobs, majors no longer offered, Greek stories, or pranks in Fisher Hall—those are the best stories." She has worked for Tech Line since 2011, while studying English and integrated sciences for secondary education. She also serves as a student supervisor for the group.

There are about twenty-five student callers who make between 400 and 1,500 total calls per week. Tech Line callers begin their evening shifts about suppertime, or 6:00 p.m. They kick off their shoes (or snow boots, depending on the outside conditions), slide into slippers, and climb up the old wooden staircase of the Alumni House. Then comes coffee—"at least two pots."

"We all have our 'phone voices,'" says Tech Line caller and environmental engineering student Colleen Carbury. "The guys' voices go up an octave or two—it's funny."





◀ A talkative team: Michigan Tech student callers settle in for an evening of chats with alumni

## By the numbers

**400–1,500**  
calls made each week

**25**  
student callers on staff

**34,000**  
number of parents and alumni in the Michigan Tech database

**\$240,000**  
total donations from student callers in 2015

**\$50**  
average gift amount collected by student callers

The caller-curated stories, both funny and poignant, get logged into a book. While they're at it, student development officers also update alumni contact information, keeping Michigan Tech's database of more than 34,000 parents and alumni in tip-top form.

Student callers also ask for donations, which the callers say add up to make a significant impact—more than \$240,000 in 2015, with an average gift amount of about \$50.

"Sometimes we meet donors in person," Alexander says. "It's kind

of crazy showing them the newest equipment in the ME-EM and being able to say, 'yep, we did that.'" The extensive campus gardens and recent library updates are a couple of tangible ways Tech Line callers and their donors have made their marks.

It all comes full circle. Student callers have even received on-the-spot job offers. "If I ever have a phone interview, I'll rock it," Carbery says.

With the advent of caller-ID and cell phones, Tech Line is experiencing a downward trend.

These days, calls often go to voicemail.

So, the next time the 906 comes calling, let dinner wait. Ignore the emails that just won't stop. Pick up the phone. Head back in time. Give five minutes or a whole hour. Give a few bucks, if you want to. Your callers will thank you. "Every night, I leave my job knowing exactly what kind of alumna I want to be," says Alexander.

Goodbye.

# THE STUDENT INNOVATORS

IT'S A SMART NEW WORLD, AND MICHIGAN TECH STUDENTS HAVE THE LIFE-SAVING, GAME-CHANGING, TECHNOLOGY-SHAPING IDEAS TO PROPEL US FORWARD. VIVA LA RESEARCH REVOLUTION.



INFRASTRUCTURE



DYNAMIC ENVIRONMENT



TECHNOLOGY



WORLDS BEYOND



HEALTH

**W**hat can be done about climate change? How do we improve aging infrastructure? What are the best strategies for tackling complex healthcare challenges?

These are the questions our students are confronted with every day. They're working with Michigan Tech faculty across disciplines to tackle some of the toughest environmental, medical, engineering, and social

challenges on the planet—and they're finding answers. Our students are, quite literally, making tomorrow's world a brighter, safer place.

Here's how they're doing it.





Ida Fonkoue started her medical career in Cameroon, where she grew up, and practiced briefly as a physician. Now a doctoral student at Michigan Tech, Fonkoue swapped the clinic for the research lab. In the Department of Kinesiology and Integrated Physiology, she studies the effect of various stressors on the sympathetic nervous system, our built-in fight or flight response.

Alcohol is known to stimulate the sympathetic nervous system and therefore raise blood pressure. My dissertation is trying to look at whether or not the interaction between alcohol and race has a significant effect on muscle sympathetic nerve activity. Broken down: I want to know if African-Americans would have a higher sympathoexcitation induced by alcohol than their Caucasian counterparts.

## BREAKING DOWN ALCOHOL AND RACE

Fonkoue is humble about her research, calling it “a stone in the ocean,” reminding us that science is iterative, exploratory and built stone by stone. But she does have a personal vision for how to revolutionize the way we approach physiology research.

**Q: What’s the big picture challenge you tackle in your research?**

A: As an African-American, I belong to a group with a high prevalence of hypertension [high blood pressure] according to the American Heart Association heart and stroke statistics.

That was the big question I want to answer in my research—and it’s always difficult to completely answer a question in one project. But at least that’s the door I want to take and then maybe other people in the future can go through with the same thinking.

**Q: How do you study sympathoexcitation?**

A: Our lab uses a technique called microneurography; to date, it’s the gold standard for measuring the activity of post-ganglionic sympathetic nerves. In our case, we’re looking at the



HEALTH

Nerve signals are electric pulses, which can be measured using microneurography

## TERMINOLOGY

### Sympathetic Nervous System

One of the two main branches of the Autonomic Nervous System that is responsible for our fight or flight response.

### Sympathoexcitation

Activating—or stimulating—the Sympathetic Nervous System.

### Microneurography

A method used to measure and record nerve activity in real time via a microelectrode.

### Post-ganglionic Fibers

Nerves fibers at the end of a cluster of nerve cells that connect to specific organs like the heart, kidneys, and blood vessels.

lower leg. This technique uses a tungsten electrode about the size of an acupuncture needle. One is inserted in the peroneal nerve [below the knee or on the outside of the calf] and it records the signal of post-ganglionic fibers. The signal is amplified afterwards and because the amplifier is connected to a computer, we can see the bursts of activity.

These nerve signal “waves” start in your brain. Imagine then if you have waves in the ocean, at the end of the wave the water is pushing sand away from the beach. You can look at the effect on the sand, which is like measuring adrenaline in the blood, and you can see how strong each wave was and how many waves you had. But what we’re doing is analyzing the wave as it’s passing by. You can stand somewhere in the way of the waves and you can determine how strong each wave is and how frequently they pass. That’s what we do with microneurography.

**Q: Your microneurography tests note a difference between alcohol’s effect on sympathoexcitation in African-Americans and Caucasians. What does that mean for treating hypertension?**

A: The treatment of hypertension, depending on how severe it is, often includes or is limited to lifestyle changes. Alcohol intake is often part of those changes, given how it stimulates the sympathetic nervous system. Most tests

“I make the case that **who** we treat should matter as much as **what** we treat, and that the future of a cost-effective management of hypertension lies in the individualization of treatment. It matters a great deal to be able to understand interindividual physiological differences.”

IDA FONKOUÉ

The peroneal nerve runs through the lower leg and Fonkoué uses a tungsten electrode to measure its activity





◀ Fonkou worked as a doctor in Cameroon and hopes her research will open new doors in physiology research to improve patients' hypertension treatments



studying alcohol-blood pressure effects were done on Caucasians. So we knew the general effect of alcohol on blood pressure was mostly true for a given group of individuals, but African-Americans did not seem to respond physiologically as we expected. My research on its own is not sufficient to change medical practices, but it raises questions about generalizing treatment protocols to all people when in fact it applies to some people.

This difference might not all be attributed to race but instead to other environmental factors influencing the sympathetic nervous system and blood pressure in each group.

**Q: You call this “individualization” in your work. What does it mean?**

A: When we talk about hypertension, it's important for physicians to think about,

“Who am I dealing with as much as they think about what? And how does this patient regulate their blood pressure?”

We are used to saying that people are different; it is true physically and even more so physiologically. We now know even more with current research that various factors—environment, obesity, physical activity, kinds of activity, race, sex—all influence people's physiology. Especially when it comes to blood pressure regulation. So in individualizing treatments, we'd be able to deal with each person according to how their system functions; the medication can just help the system work better. And we'll be able to achieve greater results with fewer

**A WAVE'S EFFECT ON SAND IS LIKE A NERVE SIGNAL'S EFFECT ON ADRENALINE IN THE BLOOD . . . YOU CAN SEE HOW STRONG THE WAVES ARE BY HOW MUCH THE SAND IS MOVED.**

molecules, in my opinion. In Cameroon, people often do not have enough money to get into lifetime treatment, which is usually needed for chronic diseases like hypertension and diabetes. It will be cheaper to find ways to prevent these diseases rather than trying to have people pay for the treatments. And in the event that prevention doesn't work, a better understanding of physiology will allow the right cost effective medical approach to be implemented.



▲ Fonkou studies high blood pressure and its connection to alcohol in African-Americans

# RESEARCH



INFRASTRUCTURE



DYNAMIC ENVIRONMENT



TECHNOLOGY



WORLDS BEYOND



HEALTH



## DISCOVERING MACROMOLECULES

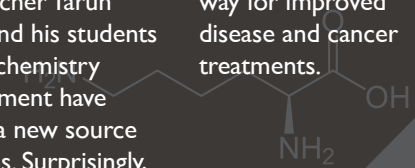
Students: Melanie Talaga, Ni Fan, Ashli Fueri, Robert Brown, Kevin Lawry, Ramandeep Rekhi, Alexander Vizurraga



Lysins are the jackhammers of the microscopic world. These heavy-duty macromolecules—usually proteins or peptides—punch holes in living cells, killing them. We use them in our guts to destroy unwanted

bacteria. Some fungi and invertebrates make them, but bacteria are the main source of lysins. Now, Researcher Tarun Dam and his students in the chemistry department have found a new source of lysins. Surprisingly,

they're in plants. Having a better understanding of these macromolecules could pave the way for improved disease and cancer treatments.



## REMOVING SYNTHETIC CHEMICALS

Student: Jennifer Julien  
Human waste is chock full of pharmaceuticals, and Julien is looking for the cleanest way to take them out and improve wastewater treatment.



## RETROFITTING A RAIL SHUNT

Students: Samuel Scott, Frank BeFay, Sean Massey, Alexander Pate

Retrofits are never ideal, but they are necessary to improve the safety of modern American railways. Better understanding the electrical properties of shunt connection systems is one step forward.



## SWAPPING ALUMINUM

Students: Annie LeSage, Alexandra Glover, Kyle Myszka, Jacob Gerdt

Cars are heavy, so some auto companies are changing over copper wiring harnesses to aluminum alloys to make them lighter. A Senior Design team in Materials Science and Engineering worked with Yazaki to test this swap.



## POLYMERIZING FISH SCALES

Student: Xu Xiang

Finding ways to deliver pharmaceutical drugs using new materials is an everyday task for Xiang, who modified fish scales using polymers to better understand their nano-mechanical properties.



## WARMING UP ROOTS

Student: Peter Hoch

Tree roots are sensitive to small changes in temperature. Hoch studies how rising temps impact sugar maple roots, microbial activity, and the nutrients bound up in the soil.



# REVOLUTION



## PLUGGING INTO SMART GRIDS

Students: Jaya Yellajosula, Elizaveta Egorova, Zagros Shahooei, Gabriel Sousa, Matheus Freitas, Junior Castro

Do you think about how electricity gets to your light switch when you flip it on? The students in Bruce Mork's and Sumit Paudyal's power grid lab do. In fact, these students working in the Power and Energy Resource Center (PERC) plug into control consoles, test live transformers, and seek out internal faults. The faster a fault is detected, Egorova says, the less damage to a transformer will be inflicted. As our utility infrastructure ages, fails, improves, and changes, these students will help figure out how to smartly power the world.

## DELIVERING A DYNAMO

Students: Kristopher Benaglio, Christopher DeGroot, Adam Deibler, Kenneth Smith

Calibrating a dynamometer is an essential part of many mechanical engineering tests. This Senior Design team hammered out a design for John Deere to make the device more transportable, expanding the testing range.

## GATHERING AROUND GEOTHERMAL

Students: Edward Louie and the Alternative Energy Enterprise

Mining is an important part of the Keweenaw's history. Now, an interdisciplinary team of more than ten students is looking at how to tap into minewater reservoir for geothermal heating and cooling.

## INTERPRETING DATA INTO SOUND

Students: Tom Conran, Paul Kirby, Collin Doerr-Newton, Mason Pew

Sound design isn't just for movies. These students interpreted wolf population data from Isle Royale and turned it into interactive audio.

# IT'S ALL GEEK TO ME



**If your inner nerd hungers for more, we've got you covered!**

Check out @MTUresearch, where science writer @aw\_mills and our researchers geek out about their favorite topics—

everything from the science of dogsledding to water scarcity to pancreatic beta cells.

Want to know more about student research at Michigan Tech? Drop us a line at email@mtu.edu.

## PROGRAMMING THE MIND MUSIC MACHINE

Students: Steven Landry, Paul Kirby, Joseph Ryan

Teaching a machine to learn is tricky. Teaching a machine to read human emotions is even harder. But that's what these interdisciplinary computer science and cognitive science students do.

## COLORING EMOTIONS

Student: Zhine Kang

As technology gets smarter, we hope to tune it into our emotions. Kang is toying with how to make a room's color change based on physical mood indicators like blood pressure and breathing rate.







“Climate change is very real and no one person can stop it. However, I’m doing the best I can to further humanity’s understanding of this global process through research.”

SARAH HARTTUNG



## DISMANTLING A MESOCOSM

STUDENT: SARAH HARTTUNG

Some students aren’t afraid to get their hands dirty. Harttung is willing to dive elbow-deep into sopping wet peat and slice off chunks using a bread knife. She did just that over the summer

while helping US Forest Service researchers and ecology faculty, including her advisor Evan Kane. They dismantled a peat mesocosm experiment that spanned four years as part of ongoing ecology research

to better understand global carbon cycles. A mesocosm, Harttung says, is the balance between micro and macro—the perfect size for a big-to-do kind of experiment.



DYNAMIC ENVIRONMENT







INTO

THE

COAL

PATCH







What is archaeology anyway? How about anthropology? Indiana Jones comes to mind, digging up cursed Egyptian tombs.

But for Bode Morin—who earned a PhD in Industrial Heritage and Archaeology and an MS in Industrial Archaeology at Michigan Tech—and Kim Barton, who got her BS in Anthropology from Tech in 2013, it’s all about the present, and how the culture of the past impacts people living today.

Morin runs Eckley Coal Miners’ Village, a preserved industrial mining village in northeastern Pennsylvania. By happenstance, Eckley Village turned out to be where Barton landed as an Office of Surface Mining Reclamation and Enforcement/Volunteers in Service to America (OSMRE/VISTA) volunteer, in coordination with the Appalachian Coal Country Team.

“It was a surprising coincidence,” says Morin. Barton’s name was one on a list of several potential OSMRE/VISTA volunteers offered to Eckley. But he didn’t hire her because of their Michigan Tech connection.

**Taking a closer look at a northeastern Pennsylvania coal town that experts describe as “frozen in time.”**



"Kim came from a mining community (in Kentucky) and partially grew up there," he explains. "She went to college in a historic mining community. She studied mining and its cultural implications. She was a perfect fit for the job."



▲ Bode Morin uses his industrial archaeology degrees from Tech to bring a 19th century coal miners' village back to life

Barton had ranked Eckley Coal Miners' Village at the top of her list of preferred sites. "My background is in mining, and my senior thesis was on mining policy in Ontario and how it affects the First Nations people there," she says. "I

understand the cultural implications of the mining industry, and I wanted to explore ways to use that part of my education."

## A Village Frozen in Time

Eckley calls itself "a village frozen in time." It was founded in 1854, a planned "coal patch town" like so many others built by mining companies in remote rural areas to house their employees close to the mine sites.

Many of the miners and their families who lived in Eckley were immigrants who went to work in the mines and saved money to buy land, planning to return to the farming life they had known

in Europe. But the company towns ensnared them. Living in company houses, shopping in company stores, most of them never managed to escape the poverty and hardship of mining village life.

Today, Eckley is what Morin calls "a living museum." Tenants live in its houses, and volunteers from surrounding communities—often in 19th century dress—show visitors around its original grounds and 110 original buildings: Immaculate Conception Church (built in 1861), slate pickers' cramped houses, the company store. They present programs that bring to life the working conditions; employment practices; and the social, economic, and cultural life of the coal mining community.

And there are plenty of visitors. Located in the Pocono Mountains, twenty-five miles from Wilkes-Barre, Penn., and just two hours from New York and Philadelphia, Eckley is a convenient destination for the half a million people who live in the region and travelers on two nearby interstates. "We've put up a lot of signs," says Morin.

But the village is more than a tourist attraction, at least to Morin and Barton.

## The Past Informs the Future

"It's important for us to know our past in order to prepare for the future," Morin explains. "Coal fueled the ear-



### ECKLEY MINERS' VILLAGE

Coal miners and their families lived in these houses built by the mining company in the mid-19th century. Today, volunteers from surrounding communities dress in period garments and stroll or ride horses through the streets of Eckley Village.



**1 VISITORS' CENTER**  
Includes an orientation video and exhibits about the history of Eckley and the life of coal mining towns.

**2 CHURCH OF THE IMMACULATE CONCEPTION** This church's altar was consecrated on Oct. 25, 1861. At first it was a mission of St. Joseph's Church of Laurytown.



ly stages of America's industrial revolution. The technology changed the fabric of society. It's important to protect, preserve, and study it."

Barton agrees. "This job let me put anthropology to work," she says. "I was helping people connect with their heritage."

Eckley brings to life the difficulties early immigrants faced—struggles that low-income Americans still face, Barton points out.

The local community's support of the coal miners' village surprised and delighted Barton. "Watching people respond to their own specific cultural history and heritage was so inspiring," she says.

Barton's year of OSMRE/VISTA service is over now. She's taken a job as a grants specialist with the Girl Scouts Heart of Michigan in Kalamazoo. She's not sure what her future holds, but she's sure it will involve nonprofit work, possibly in environmental awareness, a special love of hers.

Morin continues to direct Eckley Coal Miners' Village for the State of Pennsylvania, committed to helping people connect with their history and understand "how we got here."

"Besides," he says, "it's so cool."



**3 LABORERS' DOUBLE DWELLINGS** These small houses were home to unskilled workers and their families. Each had four rooms and a shallow stone cellar to store food grown in backyard gardens.

**4 MINERS' DOUBLE DWELLING** Larger than the laborers' houses, these homes housed the families of first-class or contract miners.

**5 COMPANY STORE** This "company store" was constructed in 1968 as a movie prop for the film *The Molly Maguires*. The original store was at the west end of town.

**6 COAL BREAKER** Mined lump coal was cleaned and sized in the breaker. This one is a movie prop built in 1968 near the site of the three original breakers.

**7 ST. JAMES PROTESTANT EPISCOPAL CHURCH** The St. James Episcopal Church was established in Eckley Village in 1859, and was demolished in 1938. A nearly identical St. Paul's Protestant Episcopal Church of White Haven was moved to the site in 1974.

**8 MINE OWNERS' HOUSE** The mine owners lived in the largest and most fashionable houses in the village, located away from the miners' cottages and commercial buildings.



Kim Barton '13

## A MASTER'S PROGRAM WITH ITS FEET ON THE GROUND

There are more ways to earn a master's degree than sitting in class, working on your advisor's research, and writing a thesis.

Michigan Tech, known for its dynamic Peace Corps Master's International program, is the only university in the country to offer a master's degree through the Peace Corps Coverdell Fellows program for returning Peace Corps volunteers. Tech is also the first university in the country to partner with the OSMRE/VISTA to wrap volunteer service and course work into a master's degree.

Although Tech alumna Kim Barton worked at Eckley Coal Miners' Village as an OSMRE/VISTA volunteer, she wasn't in Michigan Tech's program. Rhiana Williams was. She spent her year of VISTA service working with the OSMRE/VISTA Western Hardrock

Watershed Team in Colorado, and last summer, she finished her master's degree at Tech—the first graduate of the University's OSMRE/VISTA master's program.

Both OSMRE/VISTA master's degree students and Peace Corps Coverdell Fellows receive a tuition break, said Blair Orr, a professor in the School of Forest Resources and Environmental Science and director of the two master's programs. Students in both programs typically spend a year on campus, a year as a VISTA volunteer, and a semester back on campus to complete their master's degree, Orr said.

In Tech's OSMRE/VISTA and Peace Corps Fellows programs, students can earn master's degrees in applied ecology, biological sciences, civil engineering, environmental and energy policy, environmental engineering, forestry, geology, or industrial archaeology.

# Douglass Houghton

DOUGLASS HOUGHTON  
PORTRAIT COURTESY OF THE  
UNIVERSITY OF MICHIGAN

A look back through history at how Houghton's esteemed gem and mineral collection came home to the A.E. Seaman Mineral Museum.

Douglass Houghton Falls: Houghton's name is easy to find in the Keweenaw



PHOTO COURTESY OF GOWTHAM

“Wading the streams by day, tortured by swarms of mosquitos at night—often short of provisions, and often drenched by rain—were it not that courage is uplifted by the love of science, both for its own sake and the good it is to accomplish, the task of the pioneer explorer would be hard indeed.”

—Douglass Houghton





**D**ouglass Houghton's legacy is far from small. There's the residence hall. And the town. And the waterfall. And a whole lot more.

Houghton's name can be seen in a lot of places, both in the Keweenaw and other parts of Michigan. But the New York-born physician has left more of a legacy at Michigan Tech than just signs and plaques—the Copper Country icon's personal mineral collection recently moved to the A.E. Seaman Mineral Museum, bringing the work of Michigan's first State Geologist full circle.

▼ 1849 land survey map of the Upper Peninsula

Houghton's mineral collection was a side note of his serious work studying the geology and geography of Michigan. His annual reports detailed the stark differences between Michigan's peninsulas, as well as the changes seen in the Western UP. In addition to his expertise, botany and zoology specialists joined these expeditions to begin cataloging the bounty of the state.

"I hope to see the day when instead of importing the whole of the immense amount of copper and brass used in our country we may become exporters of both."

—December 26, 1840

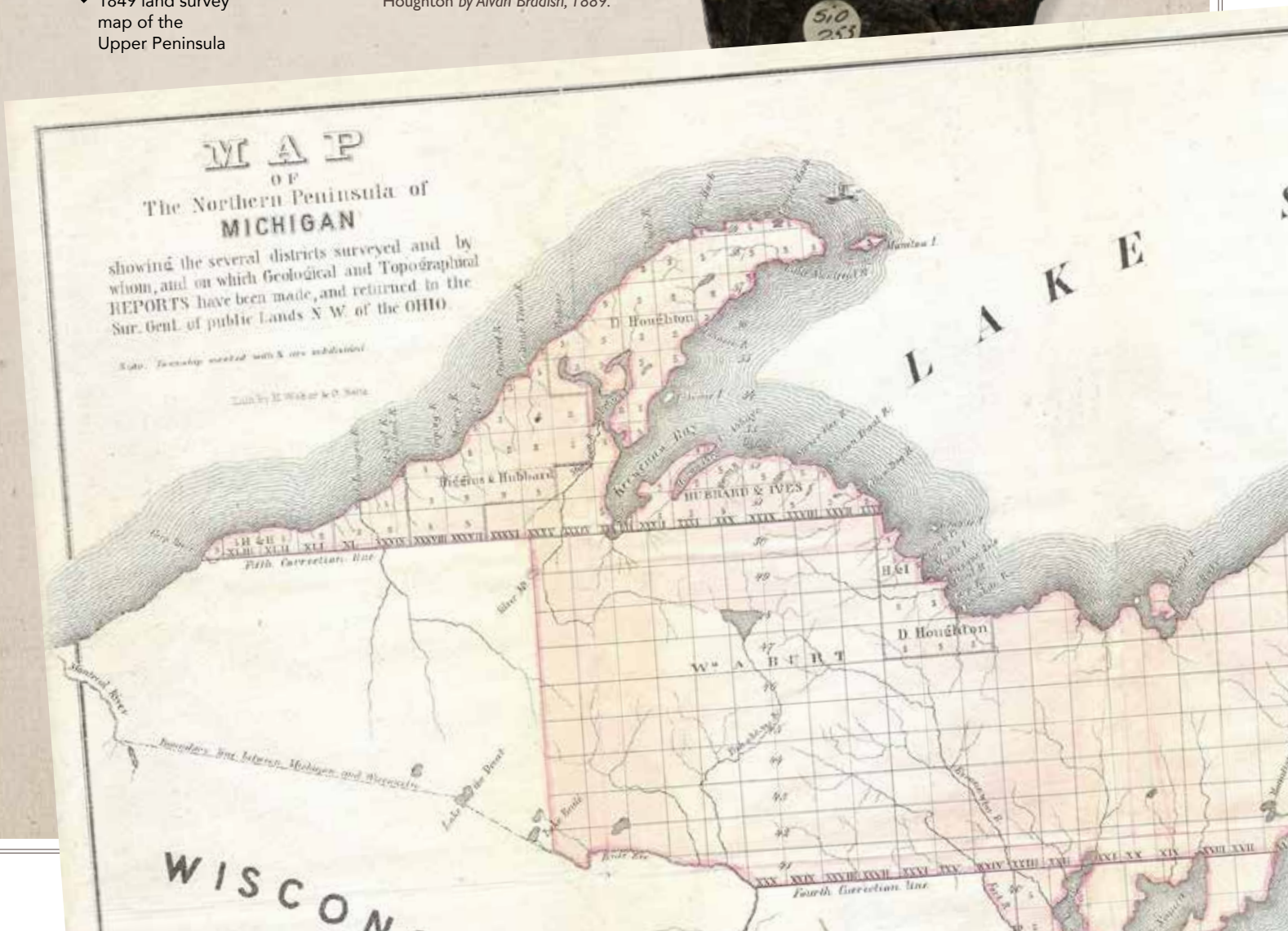
All quotes are from Douglass Houghton's personal letters as collected in *Memoir of Dr. Douglass Houghton* by Alvah Bradish, 1889.

"I hope to see the day when instead of importing the whole of the immense amount of copper and brass used in our country we may become exporters of both."

December 26, 1840



◀ Copper Crystal: One of the choice examples from Houghton's collection now on display at the Seaman Mineral Museum





“The topography and general features of the upper and lower peninsulas differ so widely from each other, that, with the simple exception of a part of the easterly extremity of the upper peninsula, they scarcely admit of a comparison.”

—*Fourth Annual Report of the State Geologist, February 1, 1841*



▲ View of Detroit 1852

During these trips, his business and real estate interests still spoke for him, representing a man considered to be honest, transparent, and thorough in his work. That's not to say that he was thrilled with the voters of Detroit when he heard the election results.

▶ The beach in Eagle River where Houghton's life ended and his legacy began



“During my absence from the city, and without any knowledge whatever, on my part, I have been elected mayor. Upon first hearing the result, I had determined to refuse to serve. But my friends advised differently, and I have consented to qualify...”

—*March 13, 1841*

Douglass Houghton was the second faculty member at the University of Michigan, and he began construction on a large home there for when he took up his position. He held back, however, from committing himself to his professorship.

“It is now somewhat doubtful whether I will remove to Ann Arbor in the spring. My house there is finished, and is quite a splendid mansion; but I am not desired to be upon the ground until the institution is fairly organized, and at least a sufficient number of the faculty to make a society of our own.”

—*January 17, 1841*

“Although I do not propose to remove to Ann Arbor



▲ Malachite, from Sing Sing (Ossining), New York



▲ Cerussite on galena from Galena, Illinois

“The topography and general features of the upper and lower peninsulas differ so widely from each other, that, with the simple exception of a part of the easterly extremity of the upper peninsula, they scarcely admit of a comparison.”

*Fourth Annual Report of the State Geologist, February 1, 1841*

▼ Copper from Ontonagon River, Michigan





for the present, I shall spend some little time there before the winter sets in, in arranging a portion of the collections. This collection of specimens, which is exceedingly choice, has now been a long time in boxes, and our people are desirous to have a portion at least so arranged as to permit examination."

—November 14, 1841

But the life of Michigan's most renowned renaissance man was not to last much longer. In 1843, overriding the objections of his crew, he commanded two canoes out of Eagle Harbor heading west in a building October storm. They navigated a stretch of scenery familiar to anyone who has lived in the Keweenaw.

▼ Houghton Memorial in Eagle River



That collection was indeed eventually curated, becoming part of the mineral collection of the University of Michigan—the very same collection that moved to the Seaman Mineral Museum this year.

It would be the last time Houghton set foot on solid ground. His body was found the following spring on the beach near what is now Eagle River; his life and work cut tragically short, but with an enduring legacy that will never be forgotten.

“This collection of specimens, which is exceedingly choice, has now been a long time in boxes, and our people are desirous to have a portion at least so arranged as to permit examination.”

November 14, 1841





# TECH

# Tastes

**THE MICHIGAN TECH FOOD SCENE: HOT OR NOT? WE UNWRAP THE TRENDS AND OTHER TASTY TIDBITS TO GET TO THE CORE.**

**F**ood is having a moment. The pre-packaged, heat-and-eat convenience items of the 70s and 80s have been pushed aside and real, honest-to-goodness food has taken their place. We have become a society of farmers markets, Pinterest recipe shares, and celebrity chefs. We don't bring home the bacon and fry it up in the pan—we buy artisanal gnocchi and

brown-butter sauté it with fresh sage.

With really good food on so many peoples' minds—and plates—it begs the question: what's on the plates here at Michigan Tech?

We've all heard the jokes about Midwestern cooking—Jell-O salad, 'hot dish', the four regional food groups (meat, potatoes, cheese, and beer). But is far-northern Michigan —particularly

landlocked Houghton, located at least 100 miles from the nearest full-blown city—really the food desert these jokes would have you believe?

We took a closer look at the local food scene—and some of the more pervasive culinary myths—to see where Michigan Tech lands on the foodie trend spectrum. Prepare to be surprised (and hungry).





## MYTH NO. 1

### THERE'S NO GROWING SEASON.

Au contraire, say the students involved with Wadsworth Hall's organic garden. Since 2013, they've worked to plot, grow, and harvest dozens of varieties of herbs and vegetables—okra, bok choy, cauliflower; basil, spinach, wax beans, and more. The produce is then incorporated into meals served in the dining hall.

The garden is an interdisciplinary project, bringing together students and staff from Housing and Residential Life, the Sustainable Futures Institute, Facilities Management, Dining Services, and Student Affairs. It proves that farm-to-table cuisine isn't just for fine-dining establishments—it can be found in residence halls, too.

## MYTH NO. 2

### IT'S ALL MEAT AND POTATOES.

You've probably heard of Khana Khazana, Michigan Tech's student-operated international food program. What you might not know is just how popular it has become.

Started in 2010 by students Sahil Thakkar and Safayat Alam, the weekly lunch—which features traditional Indian, Asian, Iranian, Irish, Middle Eastern, and Caribbean cooking, all prepared by students—has become

Michigan Tech's most in-demand meal option. Students and staff often line up early so not to miss out on the curry, huli huli chicken, tabouli, pho ga, vavishka, and other tasty international fare. The students prepare and sell lunch weekly on Fridays during the academic year, either out of the Memorial Union Ballroom Commons Food Court or a specialty food truck parked near the Library circle (weather permitting).



◀ Students prepare food for Khana Khazana



◀ Chef Eric Karvonen shows off his cutting skills

## MYTH NO. 3

### MIDWESTERN FOOD IS UBER UNHEALTHY.

Food is trending healthier, with a focus on antibiotic-free meats and cheeses, gluten- and allergy-free goods, and lots of colorful (and vitamin-rich) fruits and vegetables. Luckily, so is Michigan Tech.

In 2013, Human Resources began offering several new wellness programs for faculty and staff, including an innovative hands-on healthy cooking class series. Dining Services Chef Eric Karvonen works with small groups of 8–14 people, teaching different styles of cooking: vegetarian, Middle Eastern, Moroccan, Italian, and more.

Menus are prepped using ingredients that complement the area and season and provide antioxidants, fiber, protein and other health benefits—

lean meats and fish; local herbs, vegetables, and berries; and items that may be intimidating to some home cooks, like kale and tofu. Along with gaining new recipes (all designed to be quick and easy, perfect for after-work preparation), class attendees learn proper techniques for dicing and chopping, marinating, barbecuing, kitchen safety techniques, and more.

Who needs 'hot dish' when you can whip up a Moroccan stir-fry and spinach gogi berry salad?



*Ready your appetite, save up some extra calories, and get ready to hit the road for a culinary extravaganza, Keweenaw style. These are a few of the can't-miss spots for belly-bursting meals and tasty treats, as recommended by Michigan Tech staff and students. Bon appetit.*

#### THE AMBASSADOR

Start at "the Ambo" for a slice of their famous crispy, thin-crust pizza. Diners rave about the BLT and tostada pizzas, but the lobster pizza—topped with garlic olive oil and served with fresh lemons for squeezing—is a must-try.

#### HUNAN GARDEN

Often overlooked by visitors, this downtown Houghton Chinese joint is a favorite amongst students and staff. The chef special-orders fresh seafood, fish, vegetables, and spices regularly; consider bypassing the traditional fare and asking him to prepare you something unique. You won't be sorry.

#### FOUR SEASONS TEA ROOM

When Huskies crave baked goods and brunch, they often head to Suomi Restaurant for pannukakku or nisu French toast. But if you've never tried Four

Seasons Tea Room, you're missing out. The homey atmosphere, miles-long tea menu, delectable savory lunches, and delicate-sweet baked goods (served with fresh lemon curd and clotted cream) will knock your socks off.

#### CAFÉ ROSETTA

Located in downtown Calumet, Café Rosetta has become a favorite spot for hearty, healthy sandwiches and specialty coffees—including their maple cream mocha and signature "Sisu Nisu."

#### CONNIE'S KITCHEN; TONI'S COUNTRY KITCHEN

Which of these two long-standing Calumet establishments has the better pasty? The answer is hotly debated amongst locals and tourists alike. Our recommendation: try them both and decide for yourself.

#### FITZGERALD'S RESTAURANT AT EAGLE RIVER INN

Pulled pork, bourbon-glazed pork chops, pork belly French toast, made-from-scratch mac and cheese, a panoramic Lake Superior view, and a beer and spirits menu that stretches on for pages . . . need we say more? It's become one of the most popular spots on the peninsula, so make a reservation for sunset and head up early to dip your toes in the Big Lake.

#### THE JAMPOT

We know you're already familiar with this quaint little shop, tucked away on quiet M-26 near Eagle Harbor. But no list would be complete without it. Run by members of the nearby Catholic monastery, the Jampot is the place to go for jams, jellies, and baked goods. Some of the real magic, however, can be found in the little-known extras: homemade jalapeno caramel, anyone?



# From the Alumni Association

CHAPTER SPOTLIGHT ▼

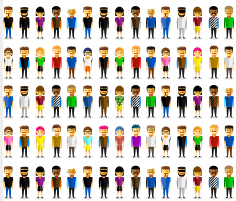
## Huskies in the D

**Michigan Tech's Detroit Alumni Chapter is one of our oldest alumni groups.** In addition to hosting popular, high-energy events—like the Great Lakes Invitational Pre-Game Party and Yooper Night at Joe Louis Arena—the chapter supports a scholarship fund that helps students from metro Detroit attend Tech.

Starting this fall, the Detroit Chapter will also be hosting socials on the third Thursday of each month. Stay up to date with the latest details by liking the chapter's Facebook page at [facebook.com/MichiganTechDetroitChapter](https://facebook.com/MichiganTechDetroitChapter).



CHAPTER AT A GLANCE ▼



12k

There are more than 12,000 Michigan Tech alumni and friends in the greater Detroit area.



15 years

Since 2000, alumni and friends have supported a scholarship fund for qualifying graduates of a Detroit-area high school.



Signature Event

The Chapter hosts the Great Lakes Invitational pre-game party, complete with Michigan Tech swag and pickled eggs imported from the Keweenaw.



New Tradition

On the third Thursday of each month, alumni and friends are invited to gather for a casual social. The socials are mobile, moving to a different Detroit-area city each month.



Send-off Picnic

Volunteers plan and host this annual pre-fall semester celebration as a way of welcoming new Detroit-area students and families to Tech. Go Huskies!

▲ The Detroit chapter of the Michigan Tech Alumni Association is known for putting on popular—and well attended—networking events



## Serve on the Alumni Association Board of Directors

**Are you interested in helping fellow alumni build a strong network and connection to Michigan Tech?**

You can make a difference by serving on the Michigan Tech Alumni Association Board of Directors.

We are looking for exceptional individuals to join the board in their efforts to establish programs, set priorities for the Association, and work with the Alumni Relations team to engage alumni with the University.

The deadline for nominations is December 1. More information about the responsibilities of Alumni

Association Board members as well as the nomination form can be found at [www.mtu.edu/alumni/notables/board](http://www.mtu.edu/alumni/notables/board) or by contacting Alumni Relations at [alumni@mtu.edu](mailto:alumni@mtu.edu) or **877-688-2586**.

Get involved today, and help us make a difference!



# Help Us Recognize Outstanding Alumni and Friends

## Know a great Michigan Tech alumnus, alumna, or friend of the University?

Someone who embodies true Husky spirit, Tech integrity, or post-school success? Get them the recognition they deserve!

The Alumni Association is seeking nominations in a variety of categories for our 2016 Alumni Awards:

### Outstanding Young Alumnus/a

Presented each year by the Alumni Association to an alumnus/a under the age of 35 who has distinguished themselves in their career. The award recognizes the achievement of a position or some distinction noteworthy for one so recently graduated.

### Outstanding Service

Presented by the Michigan Tech Alumni Association to alumni and friends making significant contributions to the success of the Association and/or the University.

### Distinguished Alumnus/a

Presented by the Alumni Association to an alumnus/a who has made outstanding contributions both in their career and to Michigan Tech over a number of years.

### Honorary Alumnus/a

This award honors individuals who have provided service and support of the University characteristic of a dedicated alum. The Association reserves this award to recognize the strongest non-alumni supporters of Michigan Tech.

### Humanitarian

Presented to an alumnus/a who, through outstanding involvement and dedication, has made a significant contribution of volunteer leadership or service which has improved or enriched the lives of others and the welfare of humanity, and whose accomplishments reflect admirably on or bring honor to their alma mater.

Nomination forms are available at [www.alumni.mtu.edu/awards](http://www.alumni.mtu.edu/awards) or by contacting the Office of Alumni Relations at 906-487-2400 or [alumni@mtu.edu](mailto:alumni@mtu.edu).

Deadline for nominations is December 1.

## 2015 Award Recipients



### Distinguished Alumnus Award

Joseph M. Nowosad, Class of 1987

### Honorary Alumnus/a Award

John and Lynda Fenn  
Dr. B. Patrick Joyce

### Humanitarian Award

Justin M. Fitch, Class of 2005

### Outstanding Service

Susan L. Korpela, Class of 1978

### Outstanding Young Alumna

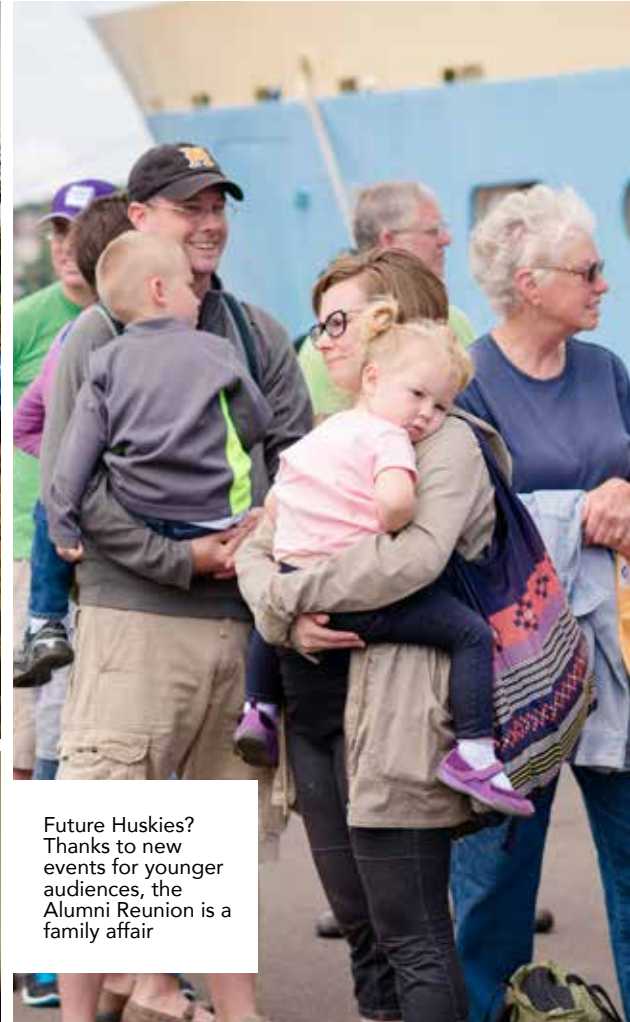
Britta A. Jost (Vande Hei), Class of 2002, 2004

▲  
Winners of the 2015 Michigan Tech Alumni Association awards (from left) Joseph Nowosad, Susan Korpela, John Fenn, Lynda Fenn, Justin Fitch, and B. Patrick Joyce

# Alumni Reunion 2015

Old friends, new memories, pasties, and more.

An energizing start to the event: the Alumni Reunion 5K



Future Huskies? Thanks to new events for younger audiences, the Alumni Reunion is a family affair



▲ Tours of the Agassiz, Tech's research vessel, have become one of the most popular Reunion activities





Fun = thumbing through old books



Reuniting with old friends



University Chef Eric Karvonen preps for weeks to prepare hundreds of pasties for the Pasty Picnic





# Class Notes

## 1960s

### **Eustace Dereniak '63**

(Electrical Engineering) was selected as the recipient of the 2015 International Society for Optics and Photonics (SPIE) President's Award in July 2015. This award is presented by the International Society of Optical Engineers to an individual who, in the opinion of the SPIE president and board of directors, has rendered a unique and meritorious service of outstanding benefit to the Society.



### **John Rees '65**

(Civil Engineering) reports: "Whidbey Island, Washington, has natural beauty every fall. This is one example."

## 1970s

### **Greg Schurig '72**

(Mechanical Engineering) has retired after over forty-two years in the pharmaceutical industry. He retired (the first time) as director of engineering at RP Scherer (Cardinal Health) after a thirty-two-year career, and finally from HKA Enterprises as project manager. He and his wife, June '74, split their time between Kalamazoo and Lewiston, Michigan.



### **Richard Newell '70**

(Electrical Engineering): "These days I am riding twenty miles on either my Gazelle or my Panasonic. I have also been swimming from 1,000 to 2,000 meters about four times a week. This year will mark thirty-four years as a Boy Scout leader. My son, Richard U. Newell, has been playing in regional and national contract bridge tournaments. I should never have taught him to play bridge."

## 1980s

### **Allyn Abel '81**

(Mechanical Engineering Technology) has spent the last thirty-two years in various aspects of machine/systems design and project management. He has been an adjunct professor for twenty-plus years at Western Michigan University, ITT-Tech of Grand Rapids, and Baker College of Muskegon, including eight years as a full-time department chair/instructor of CAD, Arch, QI, and industrial tech programs. Currently, he is designing industrial band saws used for cutting wood, metals, and other materials.

### **Susan Ulanowicz '82**

(Business Administration) is a senior global marketing project manager for the Roche Sequencing Unit of Roche

Diagnostics in Pleasanton, California.

### **Scott Zull '85**

(Mechanical Engineering) retired after more than nineteen years as senior manufacturing engineer at Bradford White Corporation in Middleville, Michigan. Scott plans to continue coaching high school volleyball and travel with his family.

## 1990s

### **Stacy Schwarze**

#### **LaPrad '96**

(Scientific and Technical Communication) and **Joseph LaPrad '96** (Chemical Engineering) married on Oct. 4, 2014.



### **Bridgette (Chapman) Rillema '96**

(Environmental Engineering) married Jacob Rillema on May 17, 2008. On December 28, 2013, they welcomed daughter Caroline Grace Rillema. They are currently living in Kent City, Michigan.

## 2000s

### **Nick Dahlheimer '06**

(Mechanical Engineering) and wife Nancy had their first child, a little boy, David Joseph, on February 23, 2015.



### **Mike Maksimchuk '09**

(Biology) married Anne Worfel on February 20, 2015. Mike also completed his M.Ed degree in March from Concordia University. The couple resides in Kent City, Michigan.

## 2010s

### **Brandon Maurisak '10**

(Civil Engineering) was a graduate of the Class of 2015 American Public Transportation Association's Early Career Program.

### **Jordan Klocko '10**

(Computer Network and System Administration) has



been promoted to IXN network operations manager with A. J. Boggs & Company, a Michigan-based software development and managed hosting company. He joined A. J. Boggs in August 2013 as a systems administrator and recently achieved his certification as a VMware Certified

Professional (VCP). Jordan manages the IXN VMware vSphere environment for clients seeking cloud services, disaster recovery, backup, and other simplified computer/network infrastructure management solutions.

### **Anne Pond '12**

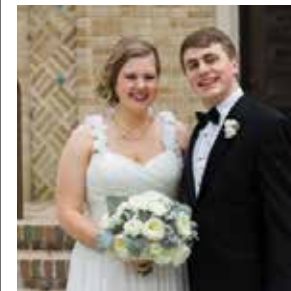
(PhD, Forest Science) shared this photo of Tech alumni,



taken recently at the 2015 Western Mensurationists' meeting, an annual gathering of forest mensurationists and biometricians.

### **Kerstin Cleveland '14**

(Chemical Engineering; Pharmaceutical Chemistry) married **Nathanael Green '14**



(Pharmaceutical Chemistry; Biochemistry and Molecular Biology) on the ultimate pi day—March 14, 2015 (or, 3/14/15)—in Houston, Texas, where they both live and work. They are second-generation Michigan Tech sweethearts, with Kerstin's parents, Michael '82 and Marie '82 (Weiss) Cleveland, meeting at Tech as well.



# Q & A

**Steven Bailey '10 (PhD, Rhetoric and Technical Communication) is an associate professor in the English Language and Literature Department at Central Michigan University, where he directs the composition program. He has written four travel guidebooks and is actively researching composition and rhetoric, creative nonfiction, and travel writing.**

Vietnamese water puppets to Filipino jeepneys. When the company relocated to Hong Kong and began publishing books, I proposed a series of guidebooks. My first guide to Macau—the former Portuguese colony about 40 miles southwest of Hong Kong—was published in 2007, and I have written three more since then.

**How do you approach guidebooks in a scholarly way?**

Plenty of scholars have noted that while many travel guidebook publishers claim to be socially conscious, their guidebooks do not really deliver on this promise. However, no scholars that I am aware of have offered concrete, practical solutions for rethinking the travel guidebook genre. I aim to fill this gap and ask how the genre can be redesigned to produce the socially conscious goals that the big guidebook publishers claim to shoot for.

**Writing is sometimes viewed as antiquated, something people used to do. Why are writing skills relevant in the 21st century?**

Writing technology has certainly changed—writing is now almost entirely performed in a digital environment—but the need for writing itself has not. Research has shown that college students who learn to write well tend to do better in the workplace. Strong written communication skills are more vital to student success than ever before—including STEM fields.

**Writing centers are prominent at many universities. Why are they so central?**

At Central Michigan University, the Writing Center is going strong. Another graduate of Tech's RTC program, Dr. Lori Rogers, serves as its associate director; in fact, the CMU Writing Center supports student writers, contributing to their academic success. This improves student retention and graduation rates—a central concern not just at CMU, but on all university campuses. However, writing centers are also coming to the forefront on university campuses because they help students develop the written communication skills employers say they need in new hires—but haven't been seeing in recent graduates.

**What's the most interesting place your travels have taken you?**

I have been to nearly 50 countries, and every last one of them was interesting. That said, Hong Kong has held my interest for several decades. A grant allowed me to spend some time there this summer researching for a book project, which focuses on the American air campaign against Japanese-occupied Hong Kong during the Second World War. I found Hong Kong to be just as fascinating as I did when I first visited the city in 1986, when it was still a British colony.

**How did you start writing travel guidebooks?**

I was fortunate to grow with a small San Francisco-based company that published the travel magazine *Things Asian*, which later morphed into a travel website: [www.thingsasian.com](http://www.thingsasian.com). I wrote nearly 100 pieces for them on everything from



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# In Memoriam

Justin M. Fitch 1982–2015

**Justin M. Fitch '05**— who was featured in the previous edition of the magazine—passed away on October 4. He had been battling stage 4 cancer for some time, but he didn't let it get in the way of his mission: preventing veteran suicides. He participated and helped organize a series of ruck marches to raise both funds and awareness. He never stopped trying to help others carry their burdens.

His story hit the national press over the summer, and enough money was raised through his campaign for Active Heroes to build the first two cabins at a retreat center in Kentucky for











veterans and their families. His wish was to see the retreat open, and while it isn't there yet, he must have known that it was well on its way.

Justin was an inspiration to us all as we put the last issue together; his determination and positivity never missing a beat. He will long be remembered by everyone who had the honor of meeting him.

Justin was 33.

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Donations to Active Heroes can be made to [www.activeheroes.org/carry-the-fallen](http://www.activeheroes.org/carry-the-fallen).

# In Memoriam



**1936**

Ferdinand J. Remondino

**1938**

William G. Mather

**1939**

L. Shirley Blackmar

**1943**

George C. Fucik Jr.

**1947**

William W. Leichman

**1948**

Octave J. DuTemple Sr.  
William F. Hartwick, PE  
Robert J. Otto  
William R. Scott

**1949**

Harold J. Barber  
Hugh S. Drewry, PE  
Robert E. Johnson

**1950**

Dr. Clyde W. Kimball  
Eldred G. Mugford  
Joseph G. Shimandle

**1951**

Richard W. Hanzel

**1953**

James L. Reum  
Elliot R. Thompson Sr.

**1954**

Patrick W. Bergmann, PE  
James G. Wark

**1955**

Henry C. Hunken  
Paul A. Opie

**1956**

John T. Bertva  
Paul D. Deeley, PE  
Trygve A. Ivesdal

**1957**

Vernon A. Fitzpatrick  
Harold C. Ruska Sr.  
Robert L. Sanders

**1958**

Roy J. Krahn  
Karl F. Otte Jr.  
Delmar R. Rediger

**1959**

David J. Edwards  
Robert R. Johnston  
Robert T. Perala

**1960**

Richard H. Smart

**1961**

Lloyd D. Rintoul

**1963**

Francis J. Allard Jr.  
Robert F. Snyder

**1964**

Marlin L. Horseman

**1966**

Michael D. Beard  
Robert H. Bohnsack  
Allan W. Hochstein  
David A. Keithly

**1967**

James R. Pharis

**1968**

Terry F. Murray

**1970**

Paul A. Pekkala

**1971**

Leslie W. Lindrus

**1972**

Byron R. Kuenzer

**1973**

Michael G. Healy

**1976**

Susan K. Gazza  
Roberta S. Kahn

**1978**

Nancy P. Drake

**1981**

Marie A. Ryding

**1983**

David S. Franklin

**1985**

Michael J. Hamm

**1989**

Chad M. Wood

**1990**

Scott W. McIntyre

**1994**

Lisa M. Henry

**2002**

Carrie L. Bryant

**2005**

Justin M. Fitch

**2011**

Keegan W. Beyer

**2013**

Adam A. Gray  
Dr. Robert O. Nara  
(Honorary doctorate)

▲  
Sunset from  
Breakers,  
March 6,  
2015



# Help Tech students create the future with annual and estate giving

**Michigan Tech**

◀ Dave and Sharron Paris



Generous donors like retired Tech employees Dave '68, '71 and Sharron Paris mean the world to Michigan Tech. Their giving has helped generations of students experience a Tech education and will continue to do so well into the future.

Whether you're considering an annual gift, impacting students today, or an estate gift, helping students in the future, your support gives our students the tools they need to create the future.

To make an Annual Fund gift or find out more about estate giving, contact the Michigan Tech Fund at [906-487-2310](tel:906-487-2310) or [877-386-3688](tel:877-386-3688), or give online at [www.mtu.edu/giving](http://www.mtu.edu/giving).

## Donor Highlights

- Have been Annual Fund supporters for 48 years—made first gift June 12, 1967
- Support Athletics, scholarships, bands, and Blizzard T. Husky mascot
- Have supported more than 15 funds/programs
- Have made a provision for Michigan Tech in their estate—their first planned gift
- They are members of the University's Second Century Society, recognizing their lifetime financial support of the University



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