

Why college is still worth it ■ Women of Tech ■ Park: Don't give up

# Michigan Tech

M A G A Z I N E

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Special 18-page section inside  
Fulfilling our vision





- 4** It's worth it  
*President Glenn Mroz on why college is still a good value*
- 7** Special section: Fulfilling our vision  
*The programs, people, and research that are driving Michigan Tech forward*

- 26** Chang Park  
*The Midyear Commencement speaker shares his tale of perseverance*
- 28** Women of Tech  
*Three alumnae from three generations recall their days at Tech*
- 32** From the Alumni Association

- 35** Class notes
- 37** Letters
- 38** In memoriam

#### Cover

Neala Creasy pauses during All Nighter statue construction as the First Year Experience makes its final push. The monthlong, residence hall statue would feature Kellogg's characters and the Cereal City factory, says the second-year applied geophysics major.

RACHAEL PRESSLEY PHOTO

#### Inside cover

Students from the Summit and Women in Engineering residence-hall learning communities give it their all during the human dogsled competition, held during Winter Carnival 2012.

GEORGE OLSZEWSKI PHOTO

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# I WANT YOU TO GO TO COLLEGE BECAUSE IT'S WORTH IT

States have been shifting more and more of the cost of college to students and their families. But a degree is still the passkey for the high-paying jobs of the future, says Michigan Tech President Glenn Mroz.

by Robert S. Benchley

**I**t isn't as though Michigan Tech senior Joe Gallo doesn't have a care in the world. Like every college student in his final semester, he still has classes to attend, homework to finish, and tests to take. But Gallo, who hails from Marquette, is more relaxed than many seniors throughout Michigan—throughout the US, in fact—because he already has a job lined up after graduation. A good job, with a \$66,000 starting salary. A job for the future.

Gallo, you see, is an engineering student, majoring in both mechanical and electrical engineering. After he is handed his diploma in May, he'll be headed to Clarksville, Tennessee, where he'll work for Hemlock Semiconductor Group, a subsidiary of Dow Corning. The company produces polycrystalline silicon, the raw material used in many semiconductors and solar panels.

"I'm excited," says Gallo. "I interned there this summer, and they treat their employees very well. I'm happy to be going back. The work is interesting, and I feel like there will be some job security, too."

You don't hear Gallo questioning the value of a college education. After all, he's a poster boy for the employability of graduates in the STEM (science, technology, engineering, and mathematics) subjects. His experience also holds up by any national measurement. In fact, the National Association of Colleges and Employers' (NACE) Spring 2011 Salary Survey reports that engineering majors account for seven of the top 10 majors in terms of starting salaries. In terms of lifetime earnings, a groundbreaking study, *What's it Worth? The Economic Value of College Majors*, from the Georgetown University Center on Education and the Workforce, reports that college graduates with an engineering degree earn, on average, \$1,090,000 more over the

course of their career than someone with a high school diploma—the greatest economic advantage of any field.

Gallo is just the latest Michigan Tech student to sign on at Dow Corning and Hemlock; the companies already employ more than 250 University alumni. "The connection matters a lot," he says. "The company believes that Michigan Tech gives us the education they need."

Nonetheless, rapidly rising college costs—four times the rate of general inflation in the past twenty-five years, according to the National Center for Public Policy and Higher Education—have caused many families to wonder if higher education is worth the expense. Add to that the economic reality of shrinking employment opportunities in a whole range of industries.

Michigan Tech President Glenn Mroz says there is no question about the value of a college degree. "A college degree has always been something that is personally rewarding," he says, "but the options it opens for career opportunities just don't happen with any kind of regularity without it. The problem with, say, skipping college and becoming an entrepreneur is there is no backstop if you fail. A degree gives you a larger perspective and helps you roll with the punches."

Cost has become a big factor, however, with state cutbacks putting Michigan near the bottom nationally in terms of state support for education. The net result is that families are forced to shoulder much more of the burden than in the past. Still, "it's about more than cost," says Michael Boulus, executive director of the Presidents Council of the State Universities of Michigan (Mroz is chair of the Board of Directors this year). "By the year 2018,

Going to college was one of the best decisions Joe Gallo ever made. With a double major in electrical and mechanical engineering, he had a job lined up months before graduation.



**“ONE OF THE DRAMATIC RESULTS OF THE ECONOMIC DOWNTURN IS THAT THE HIGH-PAY, LOW-SKILL JOBS ARE DISAPPEARING.”**

**95%**

Job placement rate

**243**

Number of companies at the fall 2011 Career Fair

**\$55,000**

Average starting salary of graduates, 1st in Michigan

most jobs in Michigan will require some form of postsecondary education. We won't have those workers if we don't give more support to education. It has a direct impact on state prosperity, and the politicians have to recognize that.”

“It's a completely different landscape of college funding than, say, ten years ago,” adds Mroz. “In 2003, we were getting about \$55 million from the state; we're now getting \$40 million—about the same as 1968—and we have 2,500 or 2,600 more students than we did then. The change in funding gives the impression that costs have gone up dramatically, but it's really a shift of the cost burden from the state to families.”

Why has the cost/benefit ratio of a college degree become such an issue? “One of the dramatic results of the economic downturn is that high-pay, low-skill jobs are disappearing,” says Mroz. “As the economy has begun recovering, there has been a change in the marketplace. Employers are looking for graduates with more skills—STEM skills in particular.”

Can he quantify the value of a Michigan Tech degree? “You need to look at two things: job placement rates and average starting salaries,” Mroz responds. “Our placement rate for 2011 was 95 percent, versus 87 percent in 2010. The average starting salary was \$55,000 in 2011, versus \$52,000 in 2010. The trend line is definitely in favor of students who graduate from here.

“The students see what's happening and talk about it all the time,” Mroz adds. “They look at what the highest-paying degree programs are, and those tend to be the most highly attended classes. If you are skilled in STEM areas, it makes a big difference. STEM graduates are more in demand because there is a shortage of workers in industries that require those skills. The marketplace is looking for the quantitative skills, the empirical skills, the problem-solving skills, the ability to think critically while doing some kind of financial or numerical analysis.”

Which brings us back to Joe Gallo. One of the additional attractions of Michigan Tech was a high school pal named Carl Vonck, who graduated in 2011. Like Gallo, he majored in engineering and had a job waiting when he graduated—with Dressler Mechanical Inc., his family's heating and air-conditioning business back in Marquette. But Vonck has returned to campus because the hometown enterprise won the plumbing and HVAC contract at Tech's Great Lakes Research Center, and he is one of the project managers. Gallo looks forward to seeing his friend and catching up over a burger. Then, he acknowledges, they may arm wrestle for the check. After all, they will both have money in their pockets. ■



In 2006, the Michigan Tech community got together and committed itself to three foundational principles: distinctive, discovery-based educational **programs** and student-life experiences; outstanding **research** that better the human condition and promotes sustainable economic development; and investment in and support of the outstanding **people and places** that make it all possible. We hope you enjoy this special section, which illustrates in a small way how we are **fulfilling our vision.**



## The Strategic Faculty Hiring Initiative

In a frontal attack on the divisions that stand in the way of collaborative research, Michigan Tech launched its first Strategic Faculty Hiring Initiative, in 2008.

### Breaking boundaries



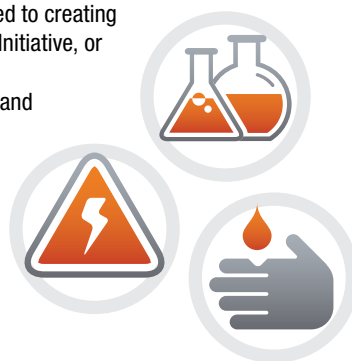
**M**ichigan Tech research focuses on interdisciplinary thrusts that are defining the future: biotechnology, computational science, energy, health, sustainability, transportation, and water.

To support these research programs, the University has committed to creating seven to ten new faculty positions each year through a Strategic Faculty Hiring Initiative, or SFHI.

Each initiative builds on our strengths and supports Tech's vision that its faculty and students will be innovators in research and education.

Faculty selected for these competitive positions conduct research that cuts across traditional academic lines and focuses instead on themes. They are helping redefine graduate and undergraduate education at Michigan Tech.

The first SFHI theme was sustainability. Next came computational discovery and innovation. Since then, new faculty have been hired who work on next-generation energy systems and health, including basic sciences, technologies, and medical informatics. An SFHI search is now under way for faculty who research water or transportation. Other interdisciplinary themes will be identified as the initiative progresses.



### Joshua Pearce ENERGY

**S**ustainable energy of the future will spring from many fields. Michigan Tech's commitment to cross-disciplinary research, evidenced in its Strategic Faculty Hiring Initiative, is what drew energy investigator Joshua Pearce to Michigan Tech from Queens University in Kingston, Ontario.

"I was really attracted to Michigan Tech because of the potential to form a team to do state-of-the-art solar energy and sustainability research," says Pearce, an SFHI Energy hire and an associate professor with dual appointments in the Departments of Materials Science and Engineering and Electrical and Computer Engineering.

"I have not been disappointed," Pearce says. "The breadth and depth of the solar and sustainability research on this campus is staggering."

Earlier this year, Pearce worked with six other faculty members associated with Tech's Power and Energy Resource Center. They looked at ways to integrate large quantities of solar energy into the electrical grid.

Pearce is also working with other Tech scientists on a project to make ultrahigh efficient solar cells using nano-columns.

Solar photovoltaic systems are very close to achieving the tipping point in many regions, Pearce points out. They can make electricity that's as cheap—sometimes cheaper—than what consumers pay their electric companies.

"With a critical mass of faculty interested in the materials science, device physics, and electrical engineering of solar photovoltaic technology, I hope to see Michigan Tech take a leadership role in the field, which is expanding at a blistering pace," Pearce says. "This will provide my students with great jobs when they graduate and interesting, challenging, and fun research to work on while they are here."



### Syd Johnson HEALTH

**B**ioethicist L. Syd Johnson has sent shock waves through the sports community for her stance on brain injuries in sports. In particular, she studies the impact of concussions in athletics and urges revolutionary changes in hockey and football.

An assistant professor of humanities with an adjunct appointment in the Department of Kinesiology and Integrative Physiology, she says body checking should be banned in youth hockey until the elite levels (ages 16 to 17).

"Helmets don't really help," Johnson says. "A concussion occurs when your skull goes one way and your brain the other. Helmets help with skull fractures, but they don't help for concussions, though players still think they do."

"I'm most interested in changes in the way hockey and football are played for the recreational and junior players who won't make professional leagues," Johnson says. "Youth are a neglected population of players when it comes to studying the effects of concussions. Nobody really knows the long-term consequences, nobody has studied them."

"As adults, we need to protect kids from injury," she says. "Sports are valuable. They help fight obesity, for example. But there are ethical implications. What's important in sports? What are we teaching kids?"

Johnson came to Michigan Tech in 2011 as part of the Strategic Faculty Hiring Initiative focusing on health.



**WOMEN ON  
THE FACULTY**

GOAL BY 2035: 30%  
FEMALE SFHI FACULTY: 26%

### Saeid Nooshabadi COMPUTATIONAL DISCOVERY AND INNOVATION

**S**aeid Nooshabadi was looking for a place to do research without boundaries. "This is what I've wanted to do all my life: be part of a group that understands the importance of interdisciplinary research," says the director of the Paul and Susan Williams Center for Computer Systems Research.

Since coming to the University as part of SFHI, he has been jumpstarting collaboration across the computing disciplines. In particular, Nooshabadi is developing a research program in real-time information processing, which involves crunching vast amounts of data in a very short time. He is also working to build a multimedia laboratory with a telepresence facility, a videoconference room with technology that allows people to feel as if they were together in the same room.

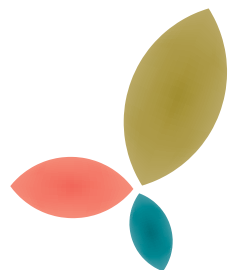
In addition, his group is developing a research effort to design cloud computing-based, personalized systems to monitor asthma patients and their surroundings, with the aim of supporting their health.

It's all taking place in the new Williams Center, a joint venture of the Department of Electrical and Computer Engineering and the Department of Computer Science. The center brings faculty from throughout campus together in the same well-designed space.

The \$500,000, 10,000-square-foot center was completed in 2011 and built entirely through private donations. In addition to funding from Paul '61 and Susan Williams, it was supported by the James Fugere Foundation, the Dave House Family Foundation, and many smaller gifts.

"The fact that this was made possible entirely through alumni donations is phenomenal," Nooshabadi said.





## Sustainability

Through our research, we hope to find keys to a sustainable future. Through our choices, we aim to lighten our impact on the planet.

### Black and Gold goes green

Michigan Tech is ahead of the curve on green initiatives. Here's some of the evidence:

- More than 100 classes have a sustainability component.
  - More than 40 groups on campus have sustainability projects.
  - Hillside Place student apartments earned a LEED Gold Award from the US Green Building Council.
  - Graduate students can earn a Certificate in Sustainability.
- Plus, the Green Campus Enterprise, which began in 2009, has become a national model for other universities. It works to lower Tech's carbon footprint. Strategies include daytime lighting controls in vacant classrooms and labs; monitoring wind speed and direction with an eye on installing a wind turbine; and shutting down idle computers.

"We want to change the thinking," says Justin Uhall, a fifth-year student who is a member of the Enterprise. "The prospects are great."

**Students in the Green Campus Enterprise check out a solar collector atop the Student Development Complex.**



### Gardens galore

Lynn Watson, Tech's master gardener, has been fashioning a campus of enchanting blooms since 2008.

She has planted more than forty lush perennial gardens designed to require minimal weeding and water. Fertilizer is organic, courtesy of a local dairy farm. And Watson says the plantings, including a vegetable garden at the student bus stop, are "happy": sustainably healthy and flourishing. Songbirds and butterflies now grace the landscape, and pedestrians enjoy seeing what is new and in bloom.

Why gardens at a technological university? Everyone can use a little beauty in their life. And, says Watson, "They show we are into nurturing, so parents can see that this is an okay place to leave your kids."



## Sustainable Futures Institute: Leading the biofuel revolution

Nearly everyone has jumped on the alternative energy bandwagon, but Michigan Tech's Sustainable Futures Institute was pioneering biofuels and alternative energy research long before they became buzzwords. First came Wood to Wheels, a multidisciplinary effort that brought researchers and students together to design a sustainable supply chain for producing biofuel from forest products.

Now the University is a partner in three of Michigan's Centers of Energy Excellence. Working with industry, Tech researchers have contributed to the success of three new manufacturing plants in Kinross, Alpena, and Lansing that produce biofuel and related products. In another industry partnership, Tech researchers have established two commercial-scale research plantations of hybrid poplar trees, bred to grow fast and produce high-quality, low-emission fuel.

Researchers from across campus are also investigating the environmental, societal, and economic impacts of biofuels from cultivation to tailpipe. And the institute is leading the Pan American Biofuels and Bioenergy Research Coordination Network, which will support related research and education throughout the Americas.

Because research and education should go hand in hand, David Shonnard, director of the Sustainable Futures Institute, and Brad Baltensperger, chair of cognitive and learning sciences, are working with the School of Forest Resources and Environmental Science, the Department of Mechanical Engineering—Engineering Mechanics, and the Office of Institutional Diversity to give secondary school teachers research experiences in sustainable transportation technologies.



## CENTER FOR WATER AND SOCIETY

The Sustainable Futures Institute is also home to the Center for Water and Society, which promotes research, education, and outreach that focuses on protecting our freshwater resources.

Professor Alex Mayer, founder of the Center for Water and Society, received the Lake Superior Binational Forum's 2011 individual Environmental Stewardship Award for his efforts to restore the health of Houghton's Huron Creek watershed.



David Shonnard, the Robbins Chair Professor in Chemical Engineering, directs the Sustainable Futures Institute.





## Michigan Tech Research Institute, Ann Arbor, USA

**A**fter the Michigan Tech Research Institute (MTRI) opened in Ann Arbor in 2006, a local newspaper headline trumpeted: "There's a New University in Town."

Housed in the University of Michigan's backyard, MTRI was purchased through the generosity of the House Family Foundation, established by former Intel executive and Michigan Tech alumnus Dave House.

MTRI scientists have special expertise in remote sensing, which is key to their prolific research in a variety of fields, including bridge safety, water quality, climate change, conservation of natural resources, and more.

**This MTRI research buoy is one of many that monitor conditions on the Great Lakes.**

## Great Lakes Research Center

**T**here's a reason they call them the Great Lakes. And to keep them that way, Lake Superior and its siblings need the research and educational resources of a great university like Michigan Tech. So the University has built the Great Lakes Research Center (GLRC) on its waterfront.

Three-quarters of the \$25.3 million center is funded by the state, with the remainder supported by the University. Due to open this summer, it will house the research of water scientists from across campus. Researchers will collaborate to solve the mysteries and protect the future of the Great Lakes.

The GLRC's reach goes far beyond Michigan Tech. The US Army Corps of Engineers Environmental Lab in Vicksburg, Mississippi, has designated it a research and educational partner, the only one on the Great Lakes. The National Park Service and the US Environmental Protection Agency are just some of the big fish looking to the GLRC for help.

Here are some of the GLRC's projects:

- Keweenaw stream survey to detect mining impacts
- Predicting ecosystem changes in Lake Superior
- Great Lakes maritime education for K-12 teachers
- Spiny waterflea distribution and impact
- Virtual water accounting—a new paradigm for management of Great Lakes water
- Lake Superior carbon cycling



**Professor W. Charles Kerfoot made headlines in 2010 when he discovered that the invasive quagga mussel was gobbling up the plankton in southern Lake Michigan and threatening the food supply of the lake's abundant fishery. The discovery drew the attention of dozens of media outlets, including the *Christian Science Monitor*, National Public Radio, and ABC-TV Chicago.**



## Enterprise plus

Enterprise is Michigan Tech's flagship program for introducing students to the complexities of the workplace. It's an extension of the hands-on education that sets Tech apart, in and out of Enterprises—and helps students master practical skills in places you won't find just anywhere, like a working foundry.

### Real-world experience in a college degree

**M**ichigan Tech students are nothing if not enterprising. So it's no surprise that Enterprise is a signature program at Michigan Tech.

In Enterprise, students team up to solve real-world technological and business problems, often with support from industry. They not only get hands-on experience, but they also learn how to tackle workplace problems from all sides, as a team.

Enterprises draw from multiple disciplines to take on the kind of cross-cutting challenges faced by business and industry. Here are three examples:

- The new Hybrid Electric Vehicle—Automotive Computing Enterprise brings together engineering, business, and computing students to design the cars of the future.
- Humane Interface Design Enterprise (HIDE) analyzes the human-machine interface and develops better solutions. Chrysler Corporation has asked the team to evaluate touch screen controls in its luxury cars.
- Husky Game Development Enterprise has worked on several projects, including a video game called Arcane Brawlers, now available on Xbox Live.

**Gabrielle Myers, president of the Husky Game Development Enterprise, and Ryan George, the Enterprise's vice president of technology, play their video game Arcane Brawlers.**



THE NUMBER OF ENTERPRISES

28



## Space man

Brad King is Michigan Tech's leading space researcher. He is also the advisor of the Aerospace Engineering Enterprise, which took first place last year in the prestigious University Nanosat 6 competition.

The University Nanosat Program is sponsored by the Air Force Research Laboratory. Each of the eleven hand-picked teams built a small satellite ("nanosat") to perform a mission of its choosing. By winning, Michigan Tech received a contract to further develop its satellite and have the US Department of Defense (DOD) launch it into orbit.

Michigan Tech's 154-pound entry is called Oculus-ASR, for its role as an orbiting eye. "The DOD wants to know what's orbiting the Earth, who owns it, what it's doing, and what it might do in the future," said King.

Unless you use an extremely powerful telescope, satellites look like nondescript dots of light drifting overhead. Yet, those dots actually provide lots of information. The trick lies in analyzing that information, and Oculus was designed to do just that.

"In general, our role will be to calibrate air force telescopes," said King. "It's a very capable little vehicle. There's a lot packed into it."

Nanosat is exceptionally grueling for a college competition. "Reviewers come from all over government and industry, and they don't take it easy on the teams," he said.

Above all, Nanosat teaches the Aerospace Enterprise students about engineering design. "They discover that design is really about accountability, proving that your design works. That's where we excelled," King said. "Our students also know how to build things, know how to do hands-on design, and that was an advantage."

**L. Brad King, Ron and Elaine Starr Professor in Space Systems Engineering**

## Ladies and gentlemen, start your engines

Tech students go head to head against universities across the nation in design competitions that test their teamwork and engineering skills, including three sponsored by the Society of Automotive Engineers. Several are also Enterprises. Here are some of those contests:

- SAE Formula Car
- Blizzard Baja
- SAE Baja
- Eco-Car
- SAE Clean Snowmobile Challenge

And, it's not just about engines. Tech students are fierce competitors in the American Institute of Chemical Engineers Chem-E-Car event and the American Society of Civil Engineers Concrete Canoe and Steel Bridge competitions.

Since 2002, Michigan Tech has hosted the Clean Snowmobile Challenge, sponsored by the Society of Automotive Engineers. The goal: take a stock snowmobile, reduce emissions and noise, and maintain or boost performance. Michigan Tech's battery-powered entry in the 2012 SAE Clean Snowmobile Challenge is pictured.

## Old tech is new again

Michigan Tech is one of the few schools in the nation where students have access to a working foundry.

"Many universities got involved in nano and biotechnology, and metal casting went out of favor," says Paul Sanders, an assistant professor of materials science and engineering who came to the University in 2009 and advises the Advanced Metalworks Enterprise. "We kept our foundry. We even improved the technology, while many got rid of it, and now we find that it's critical to our future."

Sanders uses the foundry in his research, and the Advanced Metalworks Enterprise depends on it to develop solutions to problems posed by its industry clients.

It's also a popular tool for materials and mechanical engineering students, who use it to learn the entire industrial casting process. "They don't just make stuff," says Sanders. "They model it, cast it, characterize it, and look for ways to make it better." Once they are up to speed, students use the foundry to make a cast item of interest to them. Projects have included cast iron skillets, cow bells, broomball-trophy belt-buckles, and tow hooks for four-wheelers.

Students like the foundry so much they use it on their days off: three or four Saturdays a year, the Advanced Metalworks Enterprise holds Foundry Fun Day.

OVER  
**10%**  
OF AMERICA'S FOUNDRY  
ENGINEERS HAVE BEEN  
EDUCATED AT  
MICHIGAN TECH.

In 2008, a team of Michigan Tech students was among the elite 100 who made it to the World Finals of the ACM International Collegiate Programming Contest, dubbed "The Battle of the Brains." Over 6,500 teams of code warriors from around the world competed for the honor.



## Going global

Going to Michigan Tech isn't always about being at Michigan Tech. Students have plenty of opportunities to expand their horizons.



Peace Corps volunteer Megan Abbott with friends in Belize.

### Peace Corps Master's International Program biggest in the US

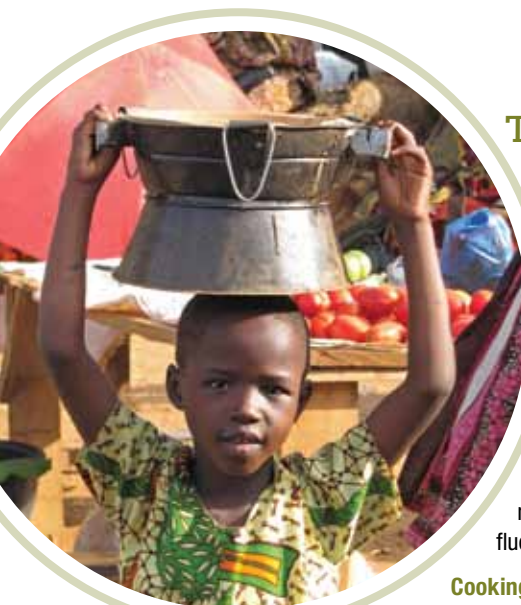
For three years in a row, Michigan Tech's Peace Corps Master's International programs have topped the nation in numbers of graduate students actively serving in the Peace Corps overseas. Tech offers eight Peace Corps Master's International programs.

- Applied Natural Resource Economics
- Biological Sciences
- Civil and Environmental Engineering
- Forest Resources and Environmental Science
- Mechanical Engineering
- Natural Hazards Mitigation (Geology)
- Rhetoric and Technical Communication
- Science Education

58  
STUDENTS ENROLLED IN  
PEACE CORPS PROGRAMS IN FALL 2011

122  
GRADUATES OF MICHIGAN TECH'S  
PEACE CORPS PROGRAMS

48  
THE NUMBER OF COUNTRIES WHERE  
TECH'S PEACE CORPS VOLUNTEERS  
HAVE SERVED



### Tech in Tanzania

For three years, Michigan Tech graduate students have been working with villagers in Tanzania to make their lives a little easier, thanks to a grant from the National Science Foundation. They have made progress, building social enterprises out of basic research in the process.

**Too much fluoride** Some fluoride in drinking water can prevent cavities. But if you have too much, it causes crippling skeletal deformities and severe dental problems. Bailey Gamble, who is working on an MS in Environmental Engineering, is developing a business plan in hopes of prompting entrepreneurs or nonprofits to set up an enterprise that would remove excess fluoride from the water.

**Cooking smoke** Jarod Maggio, a PhD student in environmental engineering, has spun off a nonprofit enterprise, Household Cooking Innovations. He aims to curb respiratory disease brought on by longstanding cooking practices: burning low-quality biofuels inside with no ventilation.

**Better bikes** Most bikes used to haul goods around East Africa are too expensive and too flimsy. Ben Mitchell, a PhD student in mechanical engineering, traveled to Tanzania and Kenya to look for solutions. His work has led to a partnership with World Bike Relief and support from the National Collegiate Inventors and Innovators Alliance.



### Pavlis Institute for Global Technological Leadership

Established in 2006 by a gift from Frank Pavlis '38, the institute provides leadership training to students and is capped by an international experience. Students have traveled to local schools in Ghana, providing laptop computers, a library, hands-on science instruction to school children, and community centers.

Pavlis Institute students have also visited Argentina, where they have installed solar panels to provide power in remote areas, worked with local artisans to develop ways to market crafts, taught English, and designed and installed a water purification system.

Pavlis Institute participant Mitchell Edbauer, right, in Ghana with some very excited school children.



### D80 Center

This umbrella organization for a variety of University programs, including Engineers Without Borders, is devoted to meeting the challenges of the 80 percent of the world's population that is not typically considered by those creating infrastructure, goods, and services.

**International Senior Design** Students apply their skills in developing countries. Recently, a team of mechanical engineering seniors traveled to India with two sets of braces to help disabled children walk.

**Discover Design Delight** This social entrepreneurship course gives graduate student teams one academic year to identify a pressing community need, use a human-centered design process to prototype a product or service, and craft a social enterprise to launch the solution into the world.

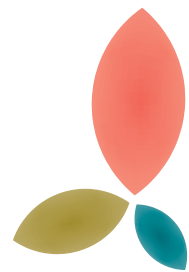
**Engineering and Construction Enterprise** Emma Getty leads this Enterprise, which has developed an infant heartbeat detector to use in the developing world. The detector, which can determine whether or not unresponsive babies are alive, is smaller than a credit card and is undergoing clinical testing at a local hospital.

Getty, 21, learned about this project when she was 16. It's the "whole reason" she came to Michigan Tech. There are eight students in the Enterprise, and she enjoys the teamwork. "We're all excited to help people and save babies."



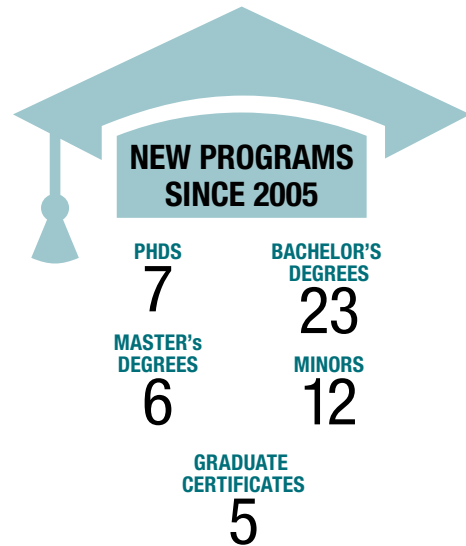
COUNTRIES WHERE  
TECH HAS  
STUDY-ABROAD  
PROGRAMS

32



## For students only

When it comes to academics, Michigan Tech students have more choices than ever.



## Playing the stock market: more than fun and games

**S**tudents in the School of Business and Economics manage more than \$1 million of real money as part of Project RISE, an international student investment competition. Tech first entered the contest in 1998, taking first place three times.

Associate Professor Dean Johnson founded the effort, called the Applied Portfolio Management Program (APMP). He received an endowed professorship created in 2011 with a \$1.16 million gift from James '67 and Dolores Trethewey, who have supported the initiative from the start. The professorship will fund scholarships, travel, and program support. Another gift, from Joe '76 and Vickey Dancy, funded extensive renovations to the team's headquarters, the LSGI Trading Room.

Over the years, the fund has grown with support from the School, the Michigan Tech Fund, individual donors, and industry.

Participation in APMP helped Danielle Linna '11 get a job and define her career goals: "I want to make an impact on national and international accounting standards and financial procedures."



**Students plot their investment strategies using a Bloomberg Terminal, which gives them access to a vast database of financial information. It is one of only two such terminals in the UP.**



**FEMALE UNDERGRADUATE ENROLLMENT**

GOAL BY 2035: 40-50%

## With honors

**T**he 190-member Honors Institute supports students dedicated to academic excellence.

Members must maintain a grade point average of 3.5, write an essay for a national competitive scholarship, and perform three contracts. The contracts allow them to investigate unusual subjects; past contracts have included "The Physics of the Trumpet" and "Chaos Baseball."

Kerry King, a third-year student in chemical engineering, has been a member since she enrolled at Tech. She says of the initiative: "This program goes beyond academics and digs deep into interests. The activities apply to life—all the things that can't be taught but are learned through experience."

"I'm so happy I chose to come here," she adds. "I love this school."



## Railway Transportation Program picking up steam

**W**hen Pasi Lautala was growing up in Finland, he caught the railroading bug. The son of a locomotive engineer, Lautala brought his passion to Michigan Tech.

He thinks railroads will loom large in America's future. So after he earned his PhD from the University, he stayed to develop a Rail Transportation Program within the Michigan Tech Transportation Institute.

The rail industry supports Lautala's vision. CN, the rail giant of Canada, donated \$250,000 to establish the CN Rail Transportation Education Center. Union Pacific, CSX, and others have pitched in. And, companies such as Amtrak, Norfolk Southern, and Canadian Pacific; rail contractors and consultants; and equipment manufacturers are sponsoring internships and hiring Tech graduates.

Tech is part of a consortium of universities that received \$3.5 million from the US Department of Transportation to establish the National University Rail Center (NURail), a rail transportation and engineering research center.

All told, Michigan Tech is riding the rails into the future of public transportation.

Lautala was interviewed on the Qinghai-Tibet Railroad for the National Geographic International documentary "Megastuctures: Extreme Railways."

**Pasi Lautala, far left, with students visiting the CN facilities in Escanaba.**



**PLACEMENT RATE AMONG 2011 GRADS**

**95%**

## Professional master's degrees: the next step

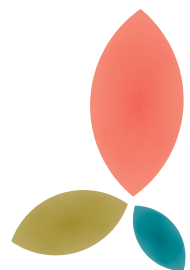
**Online MBA** In 2010, Michigan Tech launched its new online MBA program, and two years later it has already made *US News & World Report's* honor roll. Focusing on technology and innovation, this accredited two-year program makes it easy to take courses online anywhere in the world.

**Master of Engineering** Hybrid electric-drive vehicles demand a special set of skills. To prepare automotive engineers to thrive in this hybrid/electric world, Michigan Tech developed a curriculum for auto engineers that includes an interdisciplinary professional Master of Engineering and certifications in technologies for hybrid and electric vehicles.

The effort was led by Jeff Naber, the Ron and Elaine Star Professor in Energy Systems.



Jeff Naber



## The knowledge builders

The heart of any great university is its faculty, who create new knowledge and inspire generations of students.

### 50 years and counting: understanding wolves and moose

**M**ichigan Tech researchers John Vucetich and Rolf Peterson lead the world's longest predator-prey study, an in-depth look at the wolves of Isle Royale and moose, their main source of food. Peterson began working on the study as a graduate student in the 1970s and now holds the Dick and Bonnie Robbins Chair in Sustainable Management of the Environment.

Vucetich let *New York Times* readers share in his Isle Royale adventures through his "Scientist at Work" blog.



Rolf Peterson



NUMBER OF ENDOWED CHAIRS IN 2006: 7

NUMBER ADDED SINCE: 16

GOAL FOR 2035: 40% OF FACULTY IN  
ENDOWED CHAIRS

### Industrial archaeology: new insights into bygone technology

**M**ichigan Tech's archaeology faculty members specialize in remnants of the Industrial Age. They have studied coal mines above the Arctic Circle, sugar plantations in the Caribbean, and the Keweenaw's first successful copper-mining venture of the modern era, the Cliff Mine.

Alumni and friends of the department help fund a number of projects, and they have made all the difference. In addition to supporting research, they have underwritten \$100,000 in renovations to the old building known as the Annex.

"We have some really loyal friends and alumni who have been consistently generous," said Patrick Martin, chair of social sciences and the leader of an extensive dig at the West Point Foundry, a Civil War-era industrial complex in upstate New York. "They've enabled us to accomplish many things, most of which have led to the success of our students."

**Associate Professor Tim Scarlett leads a tour at the Cliff Mine archaeological dig, located near the small town of Phoenix about twenty-six miles north of Michigan Tech.**



### Professorship to honor Wiitanen

**A** new endowed professorship will carry the name of longtime electrical engineering professor Dennis Wiitanen.

Wiitanen has been "tremendously influential," said Dan Fuhrmann, chair of electrical and computer engineering. "He has been an effective educator, active researcher, and indefatigable proponent of the power systems program."

Funding for the Wiitanen Professorship in Electrical Energy Systems comes primarily from industry partners Detroit Edison, Consumers Energy, Xcel Energy, Upper Peninsula Power, and Wisconsin Public Service.



### Jeff Allen, John and Joan Calder Associate Professor of Mechanical Engineering

**F**or their pioneering work to improve water management in low-temperature fuel cells, Jeffrey Allen and his PhD student, Ezequiel Medici, were the first winners of the Bhakta Rath Research Award, in 2010.

"I am honored and grateful to be one of the inaugural recipients of this prestigious award," Allen said. "However, the credit for the success of this research belongs to Ezequiel."

Funding from the Calder professorship helps to make their work possible. "It's a measure of trust in the quality of my research, and I'm very honored by it," Allen said. "It also enables me to take risks, and that has propelled some of my most important discoveries."



### 2011 Distinguished Teaching Award winners

Every year, Michigan Tech honors two of its finest teachers.

#### Associate Professor Brian Barkdoll, Civil and Environmental Engineering

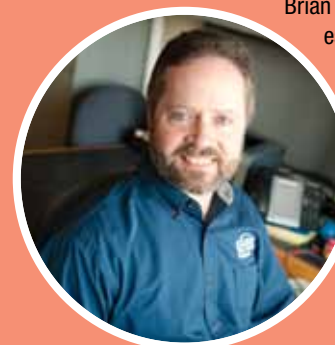
Brian Barkdoll works diligently on his teaching and establishing rapport with students, and it shows. His students say:

"He is dedicated to his students in and out of class."

"He is a one-of-a-kind professor, with a unique and effective teaching style, who inspires us to go out into the world and make positive changes."

"He is by far the best teacher I ever had at Michigan Tech."

"He is the man!"



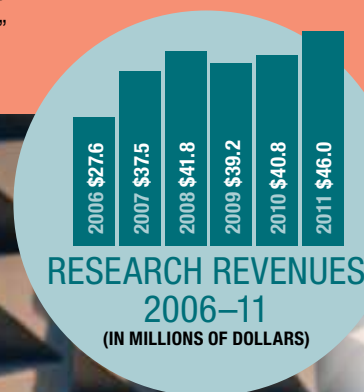
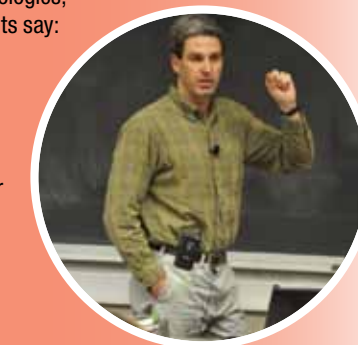
#### Senior Lecturer Mike Meyer, Physics

Mike Meyer focuses on the introductory physics classes and labs, using the latest pedagogy and technologies, including online courses. The students say:

"I've never had a teacher who cared this much about helping everyone succeed."

"He is the friendliest, funniest, and most enthusiastic professor I've ever had."

"He provides an education well worth the money I pay."



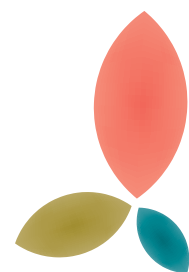
### Metamaterials scientists seek invisibility cloaks, superlenses

**E**lena Semouchkina, an associate professor of electrical and computer engineering, has found ways to capture rays of light and route them around objects, a first step toward rendering them invisible. She uses metamaterials, which are artificial materials having properties that do not exist in nature. In computer simulations, her cloak made objects hit by infrared waves—approximately one micron (or one-millionth of a meter) long—disappear from view.

A superlens would let you see a virus in a drop of blood and open the door to better and cheaper electronics. It might, says Durdu Guney, an assistant professor of electrical and computer engineering, make ultrahigh-resolution microscopes as commonplace as cameras in our cell phones. But to make a superlens, you have to overcome the diffraction limit, a natural limit on the magnification power of optical lenses. Using metamaterials, Guney has done just that, modeling a superlens that could use visible light to see objects smaller than 1/1,000<sup>th</sup> the width of a human hair.



Elena Semouchkina



## New on campus

Fresh programs and places enhance Tech academics and quality of life.



### Go outside and play!

As great as the great outdoors may be, plenty of Tech students never got to enjoy it. The Outdoor Adventure Program changed all that in 2006. Now students (and other people, for that matter) can rent all manner of outdoor equipment, from mountain bikes to sleeping bags to kayaks, at affordable prices. Students can also take advantage of low-cost canoe trips, snowshoe hikes, and more.



### Now everyone can "Experience Tech"

What fun is a ski hill if you can't afford the lift tickets? Thanks to Experience Tech, empty pockets are no obstacle when it comes to campus entertainment.

The idea took root in students' imaginations in fall 2007 and was made real a year later. For a fee of \$64 a semester, students attend hockey games and Visual and Performing Arts events, play tennis at the Gates Tennis Center, get involved in intramural sports, ski at Mont Ripley, and golf at Portage Lake Golf Course for no extra charge. For comparison, a one-day lift ticket at Mont Ripley is about \$35.

The fee helps to underwrite the Experience Tech programs. And it also does what the founders had hoped. Participation in student activities has boomed since the program took effect.

*The Wall Street Journal* picked up on Experience Tech in the article "Six College Perks that Might Make You Jealous."



### A lab for the 21<sup>st</sup> century

Ron Strickland, chair of the humanities department, calls it "a national model for labs in the twenty-first century." When the Humanities Digital Media Zone, or HDMZ, opened in April 2011, it consolidated the old Modern Language Lab and Center for Computerized Language Instruction into a technology-rich and people-friendly space that now routinely holds dozens of students.

No wonder it's so popular, what with the high-end PCs and Macs, a digital media studio, laptop classroom, private recording and listening rooms, and lots, lots more.

The \$550,000 facility is funded by the humanities department, student fees, and private donations.



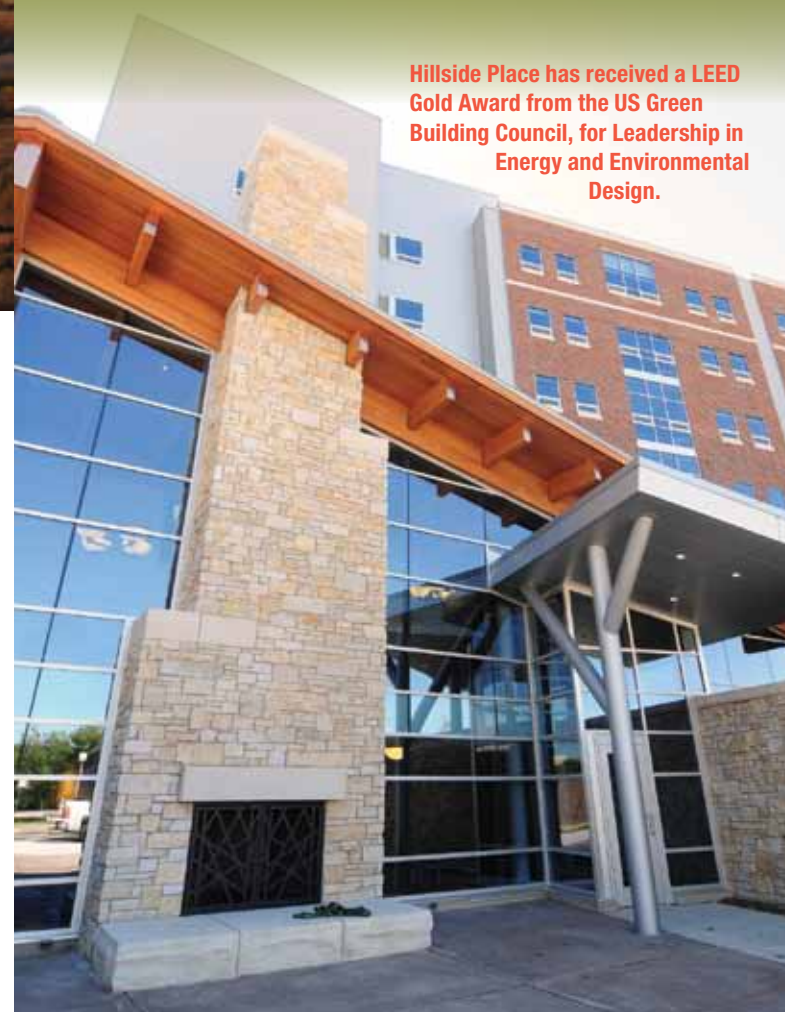
### Hillside Place: the high life

It looks pretty fancy, and it is, at least compared to dorms in the days of yore. But staying in this six-story student apartment dwelling costs no more than living in a residence hall and gives another on-campus housing choice for juniors, seniors, and graduate students.

The first residents of Hillside Place moved into their apartments in fall 2010. The forty-eight four-person suites feature granite countertops and stainless steel appliances. In the lobby, you can curl up in front of the fireplace or whip up a snack in the common kitchen.

Hillside Place fills a need for many students. "Many prefer to live on campus," said Les Cook, vice president for student affairs. "They want a quality, safe living experience, and this certainly accomplishes that."

**Hillside Place has received a LEED Gold Award from the US Green Building Council, for Leadership in Energy and Environmental Design.**



### A facelift for Fisher

It's where Tech students have sweated out calculus, physics, Spanish, and diffy q. Built in 1964, it was long overdue for a facelift. In 2006, private and public funds made it happen.

You wouldn't recognize the place: padded chairs, whiteboards, advanced technologies . . . and even food.

"The pros really like the technology in the classrooms," says Dan Rouleau, building mechanic for Fisher Hall. "Big improvements were the lighting and new ceilings in the hallways. And the Aftermath Café is a big convenience with the students. They no longer have to run to the Memorial Union for their coffee or snacks."



### On-campus childcare, preschool for "Little Huskies"

When it opened in summer 2007, the Little Huskies Child Development Center was a dream come true for many parents—and for advocates within the Michigan Tech community.

"Attracting and retaining top people involves offering services they need, and quality childcare is one of them," said Vice President for Administration Ellen Horsch, a longtime proponent of the center. "Little Huskies has been good for our people, so it was a strategic business decision."

The center's director, Eva Hatfield, couldn't agree more. "Quality childcare is extremely important. I know of faculty who said that Little Huskies was a major factor in their decision to accept positions at Tech."

The center is accredited by the National Association for the Education of Young Children and is licensed to care for up to sixty children, from infants to preschool. Located near the Student Development Complex, it caters primarily to the Michigan Tech community.





## Athletics

Fans have had a lot to cheer about.

### WCHA: Pearson named Coach of the Year

**N**ew head coach Mel Pearson '81 earned Western Collegiate Hockey Association's Coach of the Year honors for leading his squad to a major turnaround. This winter the hockey Huskies posted wins against powerhouses Denver, Duluth, and Minnesota.

The 16 victories (four times last year's win total of 4) cap a series of major improvements that began several years ago. Most recently, John '61 and Ruanne Opie committed a \$1 million gift for the Hockey Arena Renovation Project, which included luxury suites, new locker room facilities, and more comfortable seating. And the hockey program is looking forward to a video scoreboard and video streaming abilities, with generous help from alumni.



### New turf for Sherman Field

**T**alk about passing the torch! It was a great moment when Tom Kearly followed in his father, Ted's, footsteps as head football coach. What Ted did later was cause for celebration. Ted donated most of the funds needed to install new all-season turf on the field in 2008.



### Women's basketball goes (almost) all the way

**I**t was quite a run. The 2010–11 women's basketball team advanced through the GLIAC championships, regional NCAA play, to the Elite Eight in St. Joseph, Missouri, and finally to the Division II Championship game (broadcast on ESPN2). They've had support from alumni and friends all the way.

The women lost to Clayton State, but their performances united Husky Nation like it hasn't been in three-plus decades. All-Americans, all-Midwest Region (player and coach), Elite 88 (player with the best GPA at the national championship); the honors rolled in and continued a long-standing tradition: excellence in women's basketball.



### Women's soccer brings new faces

**T**he three-year-old women's soccer program is holding its own against veteran squads and giving fans another great reason to go to Sherman Field. A substantial gift from one anonymous donor made it all happen.

The new program fits in well with attempts to increase female enrollment. And the women are also upholding Tech's habit of student-athlete academic excellence: the soccer team recently earned the National Soccer Coaches Association of America Team Academic Award.



**W**e hope you enjoyed this brief overview of the amazing things that have been happening at Michigan Tech. Perhaps you are wondering what's next.

A simple answer is that by 2035, we want to achieve several specific goals: an enrollment of 8,750, including 3,000 graduate students; a faculty in which 40 percent of the professors are supported by endowments; a student body that is 40 to 50 percent female.

The University remains committed to providing transformational, hands-on undergraduate programs. Our research effort is already among the most robust in the state, and we want it to be even bigger and better.

We want to feed our students' entrepreneurial enthusiasm and encourage leadership and global literacy.

Regardless of the specifics, we can guarantee that the future will be amazing, and that it will flow from the astonishing energy and creativity of Michigan Tech's people.

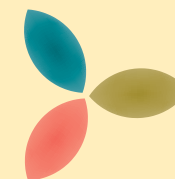
Nurturing that spirit is our highest goal. To do that in the face of dwindling state support, Michigan Tech needs more scholarships and fellowships to engage the best students and assure that all qualified applicants can enjoy a Tech education.

To attract and retain the best faculty, Tech needs more endowed chairs and professorships, which are the preeminent honor a university can bestow on a faculty member.

As a result, students and faculty are at the heart of Generations of Discovery—The Campaign for Michigan Tech. The campaign is well on its way to achieving its \$200 million goal. With your help, we will get there.

You have the power to help Michigan Tech fulfill its vision. Give and be part of it.

[www.mtu.edu/giving](http://www.mtu.edu/giving)



# Chang Park

*A life of making launchpads  
from stumbling blocks*



“Do not be afraid to step out of your comfort zone and face new challenges. You will be amazed to discover the vast pool of untapped talents that you never knew you had within you as you struggle to overcome the challenges. This is how we all grow in our life.”

*When Chang Park visited Michigan Tech, he had an opportunity to say thanks to his former professor Gladys Dawson, whose engaging teaching style helped him to pass chemistry the second time around—and ultimately earn his degree.*

*by Marcia Goodrich*

Don't give up, Chang Park '73 told the graduates at Michigan Tech's Midyear Commencement. “A setback followed by perseverance is the road to triumph.”

Park learned about setbacks and perseverance early on after he flunked Myron “Doc” Berry’s legendary introductory chemistry class in his first semester. A native of South Korea, Park was still learning English when he came to Michigan Tech, and Berry spoke so fast from the lectern that it all went over his head.

The failing grade was followed by a probation letter from dean of students Harold Meese stating that he would be expelled if his grades didn’t improve. “It was an ominous beginning,” Park noted. “I can now make the claim that I was on the dean’s list too. However, it was a list I had to remove myself from within six months.”

But Park persevered, and triumph came in the form of another chemistry professor, Gladys Dawson. “She made it so interesting and easy,” he remembers. “Some people said it was because I was taking it a second time, and I’d say ‘Not true, I didn’t learn anything the first time.’

“So if there are any graduates here today who were in the same predicament as I was in their first semester, don’t be discouraged. You will do all right,” he told the Class of 2011. “In fact, you will do very well in life. You managed to survive against such great odds at Michigan Tech that whatever challenges life brings to you from now on will be a piece of cake.”

In fact, failing chemistry turned out to be a blessing in disguise, since he had to spend an extra year at the University and used the opportunity to complete a business degree, in addition to his BS in Electrical Engineering. Park then earned an MBA from the University of Pennsylvania and eventually started his own business, about thirty years ago. He is now chairman of Universal Remote Control, based in Harrison, New York, a position that marries his engineering and business acumen. The company is a leading global designer and manufacturer of remote controls and other home automation devices.

He has come a long way. As a child growing up in Korea after the war, Park received powdered milk from USAID and warm clothing from the Salvation Army. He came to the United States

from Korea with \$200, half in his wallet and the other half sewn into his underwear by his mother—an elegant solution to Korea’s foreign currency export restrictions at that time.

“It was the number of opportunities that I received in this country since then that brought me up from where I was,” he said. “For this reason, I strive with passion for a society that empowers its people to attain their aspirations.”

That dream may be undermined by America’s income disparity, which has been growing for the last three decades. “Unless we reverse this trend, it will lead to a stagnant society where there is little opportunity for social mobility for our fellow citizens,” he said. “I believe that society flourishes only when its people enjoy economic security.”

A member of the National Governing Board of Common Cause, a public interest organization in Washington DC, Park believes that the large amounts of money required to run for public office have given inordinate power to those individuals and corporations that can afford to fund their favored candidates. “It violates the very concept of democratic equality in representation,” Park said.

“In the last election, incumbents spent almost \$1.6 million on average to hold

on to their House seats and more than \$9 million to keep their Senate seats, and over 90 percent of the candidates who raise more money end up winning,” Park said. “Unless we address the congressional campaign finance issue seriously, I am afraid that our system may fail by design.”

However, he cautioned the graduates against cynicism and urged them to hold onto their idealism. “Keep your faith in what our system can be and participate in the political process that affects us all. If you opt out, we may end up where we do not want to be as a society.”

Park also urged the graduating students to keep on learning and acquire wisdom in an increasingly complex world. “The issues we face as a nation are becoming so complex that, if I may speak metaphorically, we can no longer solve them with a basic skill set of algebra. We need to use calculus or even differential equations as a tool to understand and solve the complexity of the issues that confront us as a nation.”

Despite its challenges, “we live in an extraordinary time that offers great opportunities,” he said. “It may not always be smooth sailing. You may run into occasional hails and storms in life, and at times, nothing may seem to work.

When that happens, don’t give up. Do not be afraid to step out of your comfort zone and face new challenges. You will be amazed to discover the vast pool of untapped talents that you never knew you had within you as you struggle to overcome the challenges. This is how we all grow in our life.”

Finally, he encouraged the graduates to build their lives upon decency, integrity, and humility. “Make these the core values that define you. It will be like building a house on a rock,” he concluded. “You will not only be blessed in so many ways in your life, but you will also become a blessing to so many others. I believe this is the true meaning of life that we all strive for.” ■

# Women of Tech

For the first time, the accomplishments of Tech women will be specially recognized at Alumni Reunion this summer. To mark the occasion, Jennifer Donovan spoke with three alumnae from vastly different eras about their college experiences and what the University has meant in their lives.

Here are their stories.

“I love that I can create a product out of nothing, using just my mind, a computer, and the Internet.”



Danielle VanDyke '06 on the Google campus in Silicon Valley, where she is a senior software engineer.

## Danielle VanDyke

A generous scholarship and Michigan Tech's reputation as a good school for students interested in science, technology, engineering, and math (STEM) fields brought Danielle VanDyke to Houghton. She graduated in 2006 with dual BS degrees in Computer Science and Psychology. VanDyke credits the University with teaching her leadership and team-building skills, improving her communication skills, and encouraging her to seek new challenges every day.

As a senior software engineer at Google in Silicon Valley working on mobile display ads, she's putting those skills to good use.

“I love that I can create a product out of nothing, using just my mind, a computer, and the Internet,” she says. “Every day, my work is seen by 100 million smartphone users. The part I love most is that every day brings different challenges and new ideas to make our products better, and I can contribute to all parts of the work.”

Valuing how far her Michigan Tech education has taken her, she also pays it forward. In 2010 she helped the late Bob Mark, a professor of practice in the School of Business and

Economics, arrange a trip for students to Silicon Valley to meet with some of the legendary executives there and see for themselves what their futures as entrepreneurs might hold.

VanDyke doesn't recall any overt sexist behavior from professors, administrators, or other professionals at Michigan Tech. “There certainly was some unenlightened behavior from other students from time to time,” she says, “but it was just part of a ‘dude’ culture pervasive at the time.”

It wasn't until she decided in her junior year to add a second major in psychology that VanDyke confronted the feeling of not belonging. “Half the room was female, and I felt more like an outsider than I did in the computer science labs with my guy friends,” she recalls.

After she graduated, Michigan Tech began sponsoring women to attend the annual Grace Hopper Celebration for Women in Computing. VanDyke sees that as a strong commitment to diversity. “The University understands the importance of students networking with professionals who understand what it's like to be the one girl in the room,” she says.



“Being a successful engineer or business manager is all about linking the technical or business challenge with the hearts and minds of people,” she says, “and it is often more about the people than the technology.”

Sally Heidtke '81 is chairing the Women at Tech activities at Alumni Reunion, set for August 2–4, 2012.

### Sally Heidtke

Sally Heidtke attended Michigan Tech more than twenty years before Danielle VanDyke, graduating in 1981 with a BS in Chemical Engineering, but she doesn't remember her gender being much of an issue.

“In the late '70s and early '80s, Michigan Tech was a great place for women,” she says. “Everything was available to me that was available to the male students: intramural sports, clubs, statue building at Winter Carnival, summer internships, leadership roles on campus, and great job opportunities.” The student council president was a woman, and during Heidtke's senior year, two of the four officers of the Blue Key Honor Society were women. “The Michigan Tech Student Foundation was thriving,” she recalls, “and women were very engaged in that group.”

Still, she is enthused about the opportunities open to today's students. “I love what I am seeing from Michigan Tech students and women in particular,” she says. “Women are very high-profile as leaders on campus, and I find this very exciting. I sense increased confidence and capability. Women are very seriously attacking their studies and pursuing every opportunity available to them on campus and off. It feels like a wonderful, necessary, and appropriate sequel to what I saw as a student there thirty years ago.”

Heidtke is director of organizational development for CCI Systems, a communications systems company based in Iron Mountain. She joined CCI after twenty-four years as a manager for Procter

& Gamble, a job that developed from a summer internship while she was at Michigan Tech. “I worked side by side with 150 interns from the top engineering universities in the US, and I found that my Michigan Tech education prepared me well. That was my first indication of how top-notch my Tech education was.”

So enthusiastic is she about the value of a Michigan Tech education that she is chairing the Women at Tech portion of Alumni Reunion, set for August 2012.

During her career, Heidtke learned that an engineering or science degree enables a person to evolve in a variety of directions. “Only three of my years with P&G involved working with chemical processes directly related to my field of study,” she points out. She worked with mechanical processes, electrical power generating systems, business leadership, and in sales and logistics roles. But the common link in all of them, she says, “was the spirit of a Michigan Tech education: excellent problem-solving capabilities, critical-thinking skills, teamwork, and perseverance.”

She has some advice for students who hesitate to pursue STEM studies because they want to work more with people. “Being a successful engineer or business manager is all about linking the technical or business challenge with the hearts and minds of people,” she says, “and it is often more about the people than the technology.”

### Lina Tormen Taskovich

Lina Tormen Taskovich '52 studied chemistry and chemical engineering at Michigan Tech almost thirty years before Sally Heidtke, and she has some words of wisdom for women students too: “Study a field you like—you have to spend all your life working in it. And go for the top degree in the field of your choice. Also, do not go for the most lucrative job, but for the job you would love to do.”

When Taskovich came to Michigan Tech, the male-to-female student ratio was about 50-to-1. Only a dozen or so women were in science and engineering. She majored in chemistry, and in her freshman class, there were eight women. Her sophomore year, there were four. During her third and fourth years, Taskovich was the only one.

“With other good students, I had no problems, but with the mediocre students, it was very difficult, especially in chemical engineering classes,” she recalls. Sometimes a professor asked a question of a mediocre student, and when he couldn't answer it, the professor asked Taskovich. “When I answered correctly, the professor would say to the mediocre student, ‘A woman gave the correct answer; shame on you.’ Then, for sure, the mediocre student would pick on me after class.”

Originally from Ecuador, Taskovich wanted to attend the University of California at Berkeley, but she didn't have the math prerequisites. So she chose Michigan Tech, intending to stay only a year and then transfer to UC Berkeley.

But she discovered that her freshman chemistry and algebra classes had only fifty students in lectures and fifteen for recitation sections, compared to three thousand in Berkeley lecture classes and no recitation opportunities at all. “I decided that Michigan Tech was a very good university, so I decided to stay and complete my education here,” she says.

Michigan Tech soon became something of a family tradition. Taskovich's two brothers attended Tech, as did two sons of friends of her parents. “My brothers, Pascual and Renzo Tormen, married Calumet girls, and settled down in Michigan,” Taskovich recalls. Renzo's son, Renzo N. Tormen, also chose Michigan Tech, graduating in computer science in 1983.

After she graduated in 1952 with a BS in Chemistry and a minor in chemical engineering, Taskovich earned a master's degree at the University of Minnesota and pursued the career of her dreams: chemical research. She worked with M. S. Blois at Stanford University while Blois was exploring the importance of free radicals in biological systems, forty years before anyone else. Then she worked as a research scientist for ALZA Corporation, a start-up pharmaceutical firm in Palo Alto, California. Somehow, she also found time to raise three sons.

“The only difficulty I had wasn't being a woman, but not having a PhD,” she says. “That's why I always advise my assistants or students to go for it and earn their PhDs. With a PhD, they can move to the top. Some of my superiors at ALZA were excellent, others good, some very bad—but all had PhDs.”



“When I answered correctly, the professor would say to the mediocre student, ‘A woman gave the correct answer; shame on you.’”

Lina Taskovich graduated from Michigan Tech when the institution was 98 percent male. Her only regret was that she never completed her PhD.

### Celebrating all the women of Tech

*Back in the day, women were far more likely to forego their Michigan Tech education to get married, start a family, or go to work to support their husbands. The Tech Wives Club was very active, and many local women began their education at Tech and completed their degrees at other institutions.*

*“Many of these young women made major sacrifices and played a very important role in the ultimate success of their families,” said Alumni Relations Director Brenda Rudiger. “We count them as part of the University family and extend a special invitation to attend the 2012 Alumni Reunion. They are certainly considered among the ‘Women of Tech.’”*

*For more information on Alumni Reunion 2012, visit [www.mtu.edu/alumni/connect/reunion](http://www.mtu.edu/alumni/connect/reunion).*

## New beginnings



As I write this, I'm looking forward to attending a crucial rite of spring in the Keweenaw, the 2012 commencement ceremony. I'm reflecting back on my own commencement, all those years ago . . . the feelings of excitement, accomplishment, and endless possibility. Our collective commitment to and passion for Michigan Tech continue to strengthen the value of the degrees being granted our newest alumni.

Your alumni association proudly lives up to its mission statement "Celebrating Traditions. Creating Connections." by providing all

alumni opportunities to engage with Tech in various ways. Offering programs to mentor current students, communicating via multiple social networking platforms, hosting numerous chapter events around the world, coordinating the young alumni homecoming, and organizing the exciting Alumni Reunion are just a few of the ways your association connects you back to Houghton and your fellow Huskies, serving all generations of our shared community.

Another way your association pays it forward and creates connections back to campus is through the recently established Traditions of Giving Scholarships and Fellowships. Currently providing financial assistance to twenty undergraduate and ten graduate students, our board of directors recognized the difficult economic situation and escalating costs of higher education. We took a step to help these students, some of whom indicated that these funds made the difference between staying at Tech or having to leave school. This was in support of the crucial Generations of Discovery Campaign. The campaign has made great strides, but your support is still needed.

In a few months, many fellow Huskies will return to campus for the always-engaging Alumni Reunion. Especially exciting this year is our Celebrating the Women of Michigan Tech event, specifically targeted at our extraordinary alumnae. All alumni are strongly encouraged to make their travel plans to return to the Copper Country August 2–4.

Wherever this may find you and whatever your place in our generations of Huskies, know that you always have a home at Michigan Tech, connecting all of us. If you're in town, please stop by and say hi to our Alumni Relations staff, in the newly renovated Alumni House!

Best,

Paul J. Ninefeldt '96  
President, Michigan Tech Alumni Association



### Join Michigan Tech's online community

As a Tech grad, you can join over 15,300 alumni and access the entire alumni directory and group directories; register for events; update your info; and share your news and photos.

[huskylink.mtu.edu/join](http://huskylink.mtu.edu/join)

Your access code (first-time number) is located above your name on the address label on the back cover. What are you waiting for?

**Get connected. Get involved.**

## Alumni Events

*May 17*

Chicago—Chicago Cubs outing

*May 19*

St. Paul, Minnesota—MPR Jeremy Meesersmith Radio Show taping and social  
Dallas—Alumni Social

*May 23*

Green Bay—33rd annual Green Bay Chapter Golf Outing

*June 2*

Grand Rapids—West Michigan golf outing

*June 6*

Chicago—Chapter dinner with Les Cook, vice president for student affairs

*June 9*

Saginaw—Tri-City area golf outing

*July 14*

Traverse City—Cherry Festival Parade

*July 26*

Grand Rapids—West Michigan Student Send-off

*August 2–4*

Houghton—Alumni Reunion 2012

*August 12*

Grand Rapids—Whitecaps baseball game

*August 17*

Detroit—Detroit Tigers outing

*September 10*

Chicago—Chicago Chapter gathering with Michigan Tech President Glenn Mroz

*October 7–13*

Homecoming Week, the Fourth Annual Alumni-Student Broomball Tournament

Check out our website for up-to-date listings:  
<http://mtu.edu/alumni>.

Some chapters have regular networking events. Join your chapter's Facebook page for details.



## Get involved with your regional alumni chapter

We don't have to tell you that Michigan Tech alumni and friends are a special breed. There is something about surviving winter, chemistry, calculus, and snow; and enjoying broomball, Winter Carnival, hobo parades, cardboard boat races, etc. that create strong bonds between Tech folks, regardless of when you were on campus.

When these people get together, it does not take long for the room to buzz with conversation as they reminisce about their time at Tech.

To help connect alumni and friends to each other and to Tech, we have a dedicated group of alumni chapter leaders in seventy locations across the country and around the world. These volunteers plan events and act as points of contact not only for alumni but also for current and prospective students and their families. Don't see a chapter listed for your area? Consider becoming a chapter leader yourself. Just contact Alumni Relations at [alumni@mtu.edu](mailto:alumni@mtu.edu) for more information.

A number of chapters have regular networking events for area alumni. Join your chapter's Facebook page for details.

Check out our website for up-to-date listings of regional chapters and alumni events, <http://apps.alumni.mtu.edu/chapters>.

## New job search video service for alumni and students

- Fast, informative, engaging web videos
- Conveniently available 24–7 online
- Expert advice from leading employers

Looking for job searching tips? Check out these straightforward, compelling videos that clearly illustrate what job seekers and career changers need to know before, during, and after the job interview. Each CareerSpots video is less than four minutes long and features a genuine recruiter, career director, and a student or recent graduate.

Your Alumni Association has partnered with Michigan Tech Career Services to provide this service to aid you in your job search.

To learn more about the videos and other Career Tools for Michigan Tech alumni, visit [www.mtu.edu/alumni/products/career-tools](http://www.mtu.edu/alumni/products/career-tools).

## Stay Connected

To invite you to Michigan Tech events and activities in your area, we need to know where you are. Please let us know when your personal or employment information changes.

You can do this in several ways:

Update your profile within HuskyLink or complete the form at [www.alumni.mtu.edu/update](http://www.alumni.mtu.edu/update).

Or simply contact Alumni Relations at 906-487-2400, toll free at 1-877-MTU-ALUM, or email [alumni@mtu.edu](mailto:alumni@mtu.edu).

Thanks for staying in touch!





## Don't miss Alumni Reunion 2012!

Reconnect with your classmates and check out what's new at Michigan Tech.

Mark your calendars and plan to visit your alma mater for Alumni Reunion, August 2-4.

It's the 110th anniversary of the Michigan Tech Alumni Association, and preparations are under way to make this the

biggest reunion ever. Bring the whole family to enjoy a variety of reunion events for all ages, including picnics, department open houses, brief lectures, outdoor adventure trips, hands-on children's science demonstrations, boat rides, and more!

The featured classes will be the Golden Ms (those who graduated fifty-plus years ago) and the classes of '62, '72, '82, '87, '92, and '02.

The 2012 Reunion will also be the first ever to celebrate the women of Michigan Tech. All female graduates, former students, faculty, and staff are invited to a number of special events during Reunion, including a Saturday evening "Girls' Night Out" party hosted by the Presidential Council of Alumnae.

Group reunions are planned for men's basketball alumni, and several fraternities and sororities will be hosting gatherings as well. There will also be special events in honor of the 50th anniversary of the Department of Biological Sciences, the 85th anniversary of the Department of Mechanical Engineering–Engineering Mechanics, and the 35th anniversary of the Michigan Tech Student Foundation.

Can't make it to the Copper Country this year? You can still participate by sharing your Tech memories and letting your classmates know what's happening in your life.

Visit [www.mtu.edu/reunion](http://www.mtu.edu/reunion) for details.

# Class notes

**Let us know if you have a new addition to your family**, and we'll send you a special gift from Blizzard T. Husky! Visit [www.HuskyLink.mtu.edu](http://www.HuskyLink.mtu.edu) to post your class note, or email [alumni@mtu.edu](mailto:alumni@mtu.edu).

## 1950s

**Donald Bullock** '57 quoted Mark Twain after seeing his name in the "In Memoriam" section of the winter 2011–12 *Michigan Tech Magazine*: "The reports of my death are greatly exaggerated." He noted, "I am very much still here and enjoying it." Since the turn of the century, he has visited the Peruvian Amazon in 2001 and traveled to Antarctica in January 2003, when he crossed Drake's Passage in the *M.V. Polar Star*. "The Drake Passage is noted for its rough seas, and my trip across happened to occur when the route took us between two atmospheric low-pressure regions," he said. "Therefore the passage was among the roughest the *Polar Star* had ever experienced." He and his wife also took a more conventional trip on a cruise ship in 2008, touring the Baltic Sea area. They live in the Santa Monica Mountains, where he enjoys taking walks.

## 1960s

**James Grigg** '68 is completing his third term as mayor of Horicon, Wisconsin, and has announced his candidacy for the 39th State Assembly District for the November 2012 election.

## 1970s

**Sharri Pyke** '70 published her first story in 1969 for the *Michigan Tech Engineer*. Since then, she has seen her name in print many times and has just published her first novel, *A Crowd of Three*, available on Amazon and Kindle. You can reach her at [sharie.pyke@gmail.com](mailto:sharie.pyke@gmail.com).

**Dave Herrman** '71 has retired as administrative director of the Kissimmee Police Department in Florida. He and his wife, Gloria, are living in Saint Cloud, Florida, but plan to relocate to Michigan in the future.

**Donald Patrick** '73 (CE) retired January 31 and will be moving to Brevard in the mountains of North Carolina. During his thirty-nine-year career in government and private practice, he was involved in multi-million dollar domestic and foreign infrastructure programs, including over two years in the early 1980s in Riyadh, Saudi Arabia, for the Royal Commission constructing the new cities of Jabail and Yanbu. Donald's outside passion has been his three Corvettes, a passion he shares with Judy, his wife of thirty-nine years. They are active members of the Northern Virginia Corvette Club.

**Rick Kajander** '74 (BS Chemistry) '75 (BS Chemical Engineering) '76 (MS Chemistry) has been working at NewPage Corporation's central Wisconsin R&D center as a senior engineer for six years and notes that Michigan Tech students have been well represented as interns. Most recently, they include chemistry student Na Hu, who is now on staff in a temporary position, and chemical engineering major Suresh Bommineni, who interned last year.

**William Murchie** '76 (BSCE) is semi-retired in the Florida Keys with his wife, Suzanne. He was elected to the City Council of Layton, Florida, in November 2011.

**Sandra Doll-Gustafson** '81 is a homemaker in Oakland with three children. Her hobbies include photography, golf, volunteering, and travel. Her husband owns a restaurant in Royal Oak.

**Don Beery** '89 announces the launch of his new consulting business, Blendon Group LLC ([www.blendon-group.com](http://www.blendon-group.com)). Blendon Group provides business development, product strategy, commercialization, and key messaging solutions.

**MichiganTech**  
The Annual Fund



[www.mtu.edu/giving](http://www.mtu.edu/giving)



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Be assured, your gift—no matter the size—will help Michigan Tech to educate our bright, motivated, and adventurous students who will create the future for all of us.

To reserve your spot on the Annual Honor Roll of Donors, your gift must be received by June 30.

**GENERATIONS**  
*of DISCOVERY*  
the Campaign for Michigan Tech

**Thank you for your investment  
in Michigan Tech and our students.**

## Alumna's work selected for "Best American Short Stories" collection

Roxane Gay, who received her PhD in Rhetoric and Technical Communication from Michigan Tech in 2010, has had a story selected for the 2012 edition of *Best American Short Stories*, published by Mariner Books, a division of Houghton Mifflin Harcourt. She is now an assistant professor of English at Eastern Illinois University.

"North Country" originally appeared in the magazine *Hobart*, issue 12, released in April 2011. M. Bradley Seigel, an assistant professor of creative writing and diverse literatures in Michigan Tech's humanities department, calls it "a love letter of sorts, an epistle to the geography and culture of a place, and to the particular kind of man that place can create. Tech readers may recognize themselves."

Gay's stories and poems have appeared or are forthcoming in *New Stories From the Midwest 2011 and 2012*, *Best Sex Writing 2012*, *Salon*, *NOON*, *American Short Fiction*, *Indiana Review*, *Cream City Review*, *Black Warrior Review*, *Brevity*, *The Rumpus*, and other publications. She is the author of *Ayiti*, a collection of writing about the Haitian diaspora experience. Gay is the coeditor of *[PANK] Magazine*, along with Seigel. Her work can be found online at [www.roxanegay.com](http://www.roxanegay.com).



1990s

**Jason Brewer**, PE, SMP ’92 was named vice president of strategy and business development at Materials Processing Inc. of Indianapolis.

**Richard Weslock** ’94 has been promoted to vice president of engineering at Pinnacle Converting Equipment, where he has worked for six years.

**Christopher Coxon** ’96 announces the birth of his daughter, Sophie Grace, on April 5, 2011.

**Anna (Joyce) Mulholland** ’96 and **Todd Mulholland** ’96 were married October 14.

**Spencer** ’97’99 and **Britt (Forslund)** ’01’04 **Slade** announce the June 23 birth of their first child, a son, Eli Anders.

**Joseph Spencer** ’97 has been promoted to geo market product line manager for Baker Hughes Inc. in Cape Town, South Africa, and will be responsible for all wireline activities in the Sub-Saharan market. His wife and two children are also relocating to Cape Town from Wyoming.

Scott and **Tonya (Treichel) Albers** ’98 welcomed their second child, Jonah Scott, on August 28, 2010. Tonya is currently a stay-at-home mom for their two children and loving it.

Sara and **Robert** ’98 **Doyle** announce the birth of their son, Landon Thomas, on January 7.

**Jennifer Jermalowicz-Jones** ’98 has received the 2012 Gilbert W. Mouser Fellowship from Michigan State University, where she is completing her PhD in Water Management. The fellowship is awarded for “outstanding leadership in environmental education and conservation.” She is also the water resources director at Lakeshore Environmental Inc., based in Grand Haven.

**Jennifer Meyer** ’98 announces the birth of Leighton Ann on October 12, 2010. She was welcomed home by her three sisters, Megan, Kiersten, and Erin.

**John** ’99 and **Karrie (Schemmel) Abbitt** ’99 announce the birth of their daughter Quincee Ray, born on March 29, 2011.

Nick and **Christi (Chapman)** ’99 **Bellmore** announce the birth of their daughter, Jillian, in May 2011.

Stephanie and **Jason Groendyk** ’99 welcomed Sloane Patricia on October 25. She joins her brothers, Christian and Carey, in Phoenix, Arizona, where Jason works for the US Department of Energy’s Western Area Power Administration.

**Melonie Stothers** ’99 was selected as one of twenty 2011 “Up and Coming Lawyers” in the state by *Michigan Lawyers Weekly*. Stothers’ practice covers all aspects of commercial litigation, with a special emphasis on electronic discovery and evidence.

2000s

**Laura Williams** ’00 was married May 14 to Peter Williams. They live in the Shenandoah Valley of Virginia with their black Lab, Luke, and Laura works at James Madison University.

**Joshua Bennett** ’02 graduated from Mount Saint Mary’s Seminary on May 8, 2011, with a MDiv in Theological Studies and was ordained a Roman Catholic priest on June 11 for the Diocese of Lafayette-in-Indiana. He was assigned as parochial vicar to two parishes in Kokomo, Indiana.

Stephanie and **James** ’02 **Kuntz** announce the birth of their third child, Aiden Russell, born April 8, 2011.

Erin and **Casey** ’03 **Ries** added a third child to their family on November 3, when Molly Marie joined her two older brothers.

**Gregory Carter** ’04 (ECE) and Marissa (Lupino) Carter were married on October 15 in Ocean City, Maryland.

**Adam** ’04 (BSME) and **Beth Podleski** (BSCE) ’04 welcomed into the world their second child, Seth Matthew, on October 12.

**Adam** ’05’06 and **Melissa (Trahan) Ward** ’06 welcomed their first son, Brooks Scott, on September 17.

Courtney and **Jared** ’06 **Aymen** welcomed their first child, Trevor Joseph, on January 25.

**Joal Derbas** ’06 married Micah Johnson on October 8 in St. Joseph. They reside in Maumee, Ohio, and he works for Dana Holding Corporation as a test engineer.

**Brandon** ’07 and **Tara Bal** ’07 welcomed their first child, Jeremiah Everett, on January 4. Grandpa **Randy Bal** ’74 is very proud!

**Kathryn Gray** ’07 welcomed a daughter, Mary, born October 24, 2010.

**Jed Peters** ’07 married Heather (Warning) Peters on May 21, 2009. They welcomed their first child, Wyatt, on April 24, 2011. He’s excited to be a future Husky!

**Carrie (Markesino)** ’07 and **Mitchell** ’06 **Stump** announce the birth of Marshall Allen on August 2. They hope that he will be a Husky.

2000s

**Christopher** ’08’09 **Coughlin** and **Jana (Bloom)** ’09 **Coughlin** were married in Wisconsin on October 1.

**Joel Vertin** ’09 is a web marketing and content specialist for University Marketing and Communications at Michigan Tech. He is engaged to be married to Melissa Becker on June 16.

**Aaron Spalding** ’11 has been hired as a sales engineer with responsibilities in customer support at Monroe Mold, a manufacturer of high-precision molds for the blow-molding industry, in Saline.

Letters to the editor

More on Rachel Carson

During World War II, more soldiers died from typhus than from combat. DDT, the chemical that won WWII, eliminated typhus, eradicated malaria in the US, and worked miracles in Asia and Africa. When Rachel Carson stood up against DDT, I was developing chemical processes for “miracle drugs,” such as cortisone and prednisone, and considered her a nut case who put birds above humans.

Then a stint in corporate environmental compliance taught me about the devastating effects of persistent organic pollutants (POPs) such as PCBs and DDT in the Great Lakes. I’ve since learned about horrendous Arctic contamination by chlordane and toxaphene and discovered that, thanks to toxaphene, Lake Superior’s lake trout are the most POP-contaminated fish in North America. Yet, this fact is virtually unknown, and our health agencies hide toxaphene by not including it in fish consumption advisories.

Rachel Carson told the truth. We bury the truth while global cancer rates increase, and we chase cures while ignoring the proliferation of endocrine-disrupting and immune-system-depressing POPs. We allow developing economies to dump

toxins into Lake Superior and the Arctic via atmospheric contamination and nod our silent approval.

We do not need to second-guess the light Rachel Carson shined on problems of misapplied chemical technology. We need to stand up for the truth and aggressively seek improved global technology to replace chemicals we banned decades ago.

Lake Superior and the Arctic need a modern Rachel Carson. Where will she develop if critical analysis and speaking out are squelched?

Mel Visser ’59

Tribute to the Greatest Generation

I read with particular interest the story of John Kline ’49 in the Winter 2011–12 edition of the *Michigan Tech Magazine*. My father, Edwin N. McGlew Jr., a Navy photographer, was on the *USS Lexington* during the Battle of the Coral Sea. He shot footage from the flight deck while the *Lexington* was under attack. The film was ultimately lost from water damage as he bobbed in the Coral Sea awaiting pickup by another ship. He penned these words the following day:

*May 9: Aboard Cruiser New Orleans. Yesterday the Lexington was sunk. About 11 a.m. while our planes were attacking 2 Jap carriers, the Jap planes attacked us. It was a savage attack of torpedo planes and dive bombers. Lasted about 1/2 hour. We sustained about 3 torpedo hits and 2 bomb hits. I took movies from the flight deck but all our film has been lost. All photographers OK. Our planes came back and landed about 3:30 p.m. having sunk 1 carrier and badly damaged another, and sunk possibly a battlewagon. Fire broke out in gas stowage from torpedo hits and spread to magazine. We had to abandon ship about 5 p.m.*

*A great many men were killed.*

I have often thought about what I was doing in my late teens and early 20s as compared to what my father and John Kline were doing. I was safe and secure at Michigan Tech getting an education. My biggest challenge was accessing the computer punch card machines in the ME building and hoping my FORTRAN program would run. I am grateful for all those who have been, or who are, in military service to this country. In responding to the call of duty, they have given us all so much. Thank you for your service!

Patrick J. McGlew ’84

Michigan Tech Alumni Association

Mission Statement

Celebrating Traditions. Creating Connections.

Vision

We are passionate champions of Michigan Tech’s unique traditions and we continuously strengthen our alumni community.

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If you have a question or suggestion, please contact Alumni Relations toll-free at 877-688-2586 or email alumni@mtu.edu.

# In memoriam

The Michigan Tech family extends condolences to the relatives and friends of those who have passed away.

<b>1938</b> Byron L. Gibbs, PE	<b>1951</b> Charles H. Brown Robert S. M. Bunney Walter L. Hill E. Bruce Hockin Gordon W. Jacobson	<b>1960</b> John R. Bannen Donald C. Larson Dr. Joseph L. McGuire Lawrence E. Sweebe Charles H. Zatsick	<b>1973</b> James A. Hall, PE
<b>1941</b> Robert “Bob” M. Adams Wilbert J. Galetto James P. Swed	<b>1952</b> Daniel M. Urich Richard G. Wilbins	<b>1961</b> Judith H. (Lauren) Long	<b>1975</b> Janet C. (Neff) Ogle
<b>1942</b> John Robert Atkinson	<b>1953</b> Philip R. Michel	<b>1962</b> Gary D. Klawitter Larry W. Martz	<b>1976</b> Gerald E. Abramson Ralph S. Robertson
<b>1943</b> Bernard W. Carey Charles R. Dolsen Dr. John Towers Jack R. Wallace	<b>1954</b> Lt. Col. Ronald D. Trudell (Ret.)	<b>1963</b> Richard E. Tieder	<b>1977</b> Frank D. Erkkitz
<b>1946</b> Robert C. Behnke	<b>1955</b> Dr. Jason C. Annis George H. Heitman Richard J. Sieraski	<b>1965</b> Charles L. Poirier	<b>1982</b> Scott W. Kelly
<b>1947</b> Burnett B. (Bertie) Hojnacki Ruth M. (Blume) Rice	<b>1956</b> Harry M. Yakabe	<b>1966</b> Warren L. Hammons	<b>1983</b> David A. Anderson, PE
<b>1948</b> Loren W. Klar Sylvester J. Patyk	<b>1957</b> Kent M. Barlow Dr. Paul N. Berglund William Corkutt Edward R. Jackovich	<b>1967</b> Bruce H. Riutta Christopher J. Vizanko	<b>1984</b> Renee M. (Heikkinen) Michaelson
<b>1949</b> Frank R. DeSautel, PE Robert R. Matheson Edsel D. Matson Louis P. Quello	<b>1958</b> Clarence G. Hocking Clifford F. McGrath Douglas B. Watson	<b>1969</b> David W. Haapapuro	<b>1987</b> James W. Ciabattari Joseph A. Kovach
<b>1950</b> Albert A. Baker Jr. Gerford C. Carver Eino W. Nikkila	<b>1959</b> Peter F. Cupal, PE	<b>1970</b> Robert G. Lovell Jr. Paul S. Snelling	<b>2002</b> Trisha A. Domke
		<b>1972</b> Edward J. Linna Duane E. Warner, PE	<b>2006</b> Jack E. Willitts
			<b>2009</b> Joel R. Marsh

Don Bullock '57 was incorrectly included in “In Memoriam” in the winter 2011–12 *Michigan Tech Magazine*. We apologize for the error and invite you to read Don’s class note on page 35.

## The fine print

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You can send your comments to the editor, Marcia Goodrich, at [mlgoodri@mtu.edu](mailto:mlgoodri@mtu.edu).

Access our archives and the latest electronic edition of the *Michigan Tech Magazine* at [www.mtu.edu/magazine](http://www.mtu.edu/magazine).

## Contributors

Jaclyn Johnson provided design assistance. Jennifer Donovan, John Gagnon, Marcia Goodrich, and Dennis Walikainen contributed to “Fulfilling Our Vision.”

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## Class notes

Class notes are derived from your submissions to HuskyLink, [mtu.edu/alumni/connect/huskylink](http://mtu.edu/alumni/connect/huskylink). You may also submit your class notes to [techfund@mtu.edu](mailto:techfund@mtu.edu).

Michigan Technological University is an equal opportunity educational institution/equal opportunity employer.

## The following contributed photographs to “Fulfilling Our Vision.”

Megan Abbott: Belize children, p. 16  
David Archambeau: women’s soccer, p. 24  
Seow Chung Goh: aspen seedling, p. 11  
Mitchell Edbauer: children in Ghana, p. 17  
John Hatch: solar collector, p. 10; railway, p. 19; Jeff Naber, p. 19  
Chee Huei Lee: Lynn Watson, p. 10; Cliff Mine, p. 20  
Eric Keith: women’s basketball, p. 24  
Jared Maggio: Tanzania images, p. 16  
Greg Maino: Rolf Peterson, p. 20  
Erin Norton: Little Huskies, p. 23  
Mariusz Nowak: Elena Semouchkina, p. 21  
Kurt Paterson: water project in Nicaragua, p. 17  
Matt Peterson: Jeff Allen, p. 21  
Rolf Peterson: moose, p. 20

Ned Johnson’s generosity is helping to make a Michigan Tech education possible for Thaddeus Waterman, left, and Michel Knudsen. “By covering the hidden costs of an education, his scholarship has made it possible for me to be here instead of at a community college,” says Waterman. Says Knudsen, who is married and has two children, “It has freed me up financially, so I can afford to attend a university while supporting my family.”



## Providing for family—and Michigan Tech

Are you looking for a way to help secure your future or that of a loved one? A charitable gift annuity may be the answer.

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Visit [www.mtulegacy.org](http://www.mtulegacy.org)



Edwin “Ned” Johnson’s college education was sidetracked by World War II and a stint as a POW. He came back to Michigan Tech on the GI Bill and earned a bachelor’s degree in metallurgical and materials engineering in 1947, which launched his successful career at Cleveland-Cliffs.

Along with his steadfast annual giving, Ned supports Michigan Tech through deferred-payment charitable gift annuities. “I can’t say enough about what Tech did for me,” he says. “And, with my annuities, I can accomplish two goals: help my three children in their retirement years and support the University.”

Much of Ned’s giving supports an endowed scholarship established in his and his wife’s names.

# Michigan Tech



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