TO THE HEART OF AFRICA

by John Gagnon
A group of steadfast students traveled to Ghana last summer, on a mission to bring better medical care to that west African nation. The trip was both inspiring and disturbing.

The students tested and demonstrated an infant heartbeat detector that could reduce newborn deaths. The device quickly recognizes if a newborn’s heart is beating. Without this kind of technology, sometimes midwives set aside depressed and nonresponsive babies to die. 

On this life-altering journey, the students encountered raw sewage in gutters alongside roads everywhere; wonderfully fresh mangos and plantains; a lack of restrooms and a proliferation of cell phones. Running water was as scarce as the electric service, which was at best sporadic. So students bathed with a bucket of cold water. “I use more water here just to get it warm,” says Brooke Smith, one of four who made the trip.

Ghana, then, meant some spartan ways, but bountiful hearts. “They were so welcoming and warm,” Smith says. She recalls one person she met, who said, “We’re all people. We’re all human beings. We all have the same basic needs.”

Two years ago, Smith and a team of about twelve other students began work on the first prototype of the heartbeat detector; a year later, they had an instrument that was the size of a breadboard. The second generation, which they took to Ghana, is the size of a half-inch-thick credit card. (The third generation is expected to be the size of a band aid.)

The student team is part of the International Business Ventures Enterprise, which is supported by the McAlister Foundation.

In Ghana, Smith and the other students showed their device to physicians, nurses, and midwives to get feedback on how it could be improved. They came away with many good ideas. Make it flexible instead of rigid, so it conforms better to a baby’s small chest. (In general, babies were much smaller than they had anticipated.) Make it rechargeable instead of a throwaway. (“It’s going to be used a lot,” Smith says. “Many times a day. So we have to be very conscious of the battery life.”) Develop documentation and instructions for use and repair. (“It must be simple.”)

Smith and her cohorts encountered unabated enthusiasm from the medical people they visited. “They were excited about anything that we can bring them that would make their life easier,” Smith says.

She graduated in May 2008 but stayed on campus through July to work on the device and make the Ghana trip.

The students visited the capital city of Accra, as well as the cities of Kumasi and Sunyani, and the small village of Kranka.

They interviewed people about other medical devices they might need. One possibility for yet another project—a small heart monitor affixed to the foot of a baby with a constant digital readout of the heartbeat.

The students were surprised to find that the hospitals in the cities had sophisticated medical practices and equipment. They found what they expected in the village of Kranka: thatch huts, no electricity, no toilets, and a small clinic supported by nurses and midwives. “They were really interested in what we had to offer,” Smith says. “They can’t wait for us to come back.”

Smith has moved on to a PhD program at Cornell University. She will remember Michigan Tech for this experience—she had never anticipated such an opportunity. “I didn’t expect to become an ambassador of Michigan Tech and the US,” she says. “I couldn’t have asked for anything more.”

“I really learned a lot,” she adds. “The people have nothing, but they’re so happy, it’s heartbreaking.”

Above: In Sunyani village, the Tech students tested the heart monitor’s sensitivity to the baby’s heart rate.

Opposite: Kranka village children loved receiving their first computer, “but really began yelling and screaming after the flash of the camera,” says Nana Manteaw, in the blue shirt. Mitchell Edbauer, in the Huskies shirt, was part of the Pavlis Institute for Global Leadership and helped organize the trip with Marcella Campione and Cory Padilla.

An alumni service trip to Ghana is being planned. See page 23 for details.
She was joined by Samantha Jang-Stewart, Elizabeth Moore, and Nana Manteaw. Manteaw, a senior in psychology, is actually a native of Ghana. His mother is in Accra; his father in Chicago. He was the group’s interpreter and guide, and the trip back to his homeland was his first since coming to the US six years ago.

He made all the team’s presentations to the various medical personnel. Before he came to America, he couldn’t have done that. In Ghana, he grew up with a heavy dose of deference and forbearance, especially with regard to elders. “Young people should be humble,” he explains.

He says of life in the US: “What I learned about this culture is to be free. I learned the ability to be bold. It’s a good change.”

“My goal is to get knowledge and help not just Ghana but other countries,” he says. He’d like to help deliver electricity, sewage treatment, clean water, education, and medicine—all to bring to poor countries a better life that is sustainable.

Elizabeth Moore is a junior in biomedical engineering. She has been in the IBV Enterprise for a year and puts everything in perspective. “We’re students. We’re still learning.”

She is “super-involved” on campus. “I’ve always been a hard worker,” she avows. She put her all into the enterprise, which she calls “this awesome experience.” She wants to apply her work ethic to medicine. “I really want to end up growing organs.”

Samantha Jang-Stewart is a senior in biomedical engineering. Although not on the heart detector team, she has been in the IBV Enterprise for two years and accompanied the group to Ghana.

Like Smith, she never envisioned such an opportunity. “‘Exciting’ is a gross understatement,” she says. She describes the endeavor as practical and spiritual. “We want to create our product and bring it to the market. We’re inventing, and hopefully some day we’ll be selling. It’s a humanitarian effort. The goal is to help the most people you can in places that need it.”

She wants to be a pediatrician and envisions participating in Doctors Without Borders. “I couldn’t live full time over there, but I could dedicate at least a portion of my time. There’s no financial reward, but those people truly, truly appreciate what you’re doing.”

Jang-Stewart says of the trip and the device, “None of us really knew what to expect out there. No matter how much research you do, you can never learn fully about the environment it’s going to be used in.”

For instance, in Ghana, medical instruments are sanitized with a strong antiseptic and boiling water, so the device has to be waterproof. “We didn’t know about that,” she says. “So now we’ll go back and rethink.”

The students also have to iron out some technical difficulties. “It wasn’t a finished work by any means,” Jang-Stewart says, “but it was very promising.”

Overall, she says of her journey to the heart of Africa: “I’m just an ordinary student who has had a life-changing opportunity.”
Dozens of Michigan Tech students opened their hearts this summer to build schools for the poorest of the poor.

About 75 orientation leaders were preparing to mentor 1,400 incoming students when leadership trainer Paul Wesselmann issued a dare based on the Summer Reading selection, Greg Mortenson’s best seller, *Three Cups of Tea*. The book recounts Mortenson’s struggle to educate the poor, especially girls, in Pakistan and Afghanistan.

“Mortenson’s book addressed the difficulties of raising money, and I said, ‘It would be so cool if you guys had a basket of money to hand him when he visits,’” says Wesselmann. He also promised the students that, if they raised $1,000 by 3:00 pm, he would match it.

It was noon.

“He got us all fired up and pulled this challenge,” says senior Nick Puroll. “It was intense.”

“We had people run over to the Wads dining hall with a bowl,” says senior David Walters. One student after another pulled out ten- and twenty-dollar bills. “They said, ‘I don’t need this,’” Walters said. “One wrote a check for three-hundred dollars.”

When the dust cleared, they had raised $2,915.62.

“I heard so many times that these students are amazing,” Wesselmann said later. “What they did was remarkable.”

Blown away by their effort, he upped his original $1,000 pledge and matched the students’ total dollar for dollar, raising the donation to nearly $6,000.

“The Tech students have basically funded half a school in just a few hours,” Wesselmann said. “That says something to me about their determination. In their minds, there was never a question that they would do it. And even after we announced that we’d made the goal, students were still giving money.”

Former Michigan Tech Board member Dave Brule upped the ante with an additional gift of $21,000, from his company, Northern Star.

“After reading *Three Cups of Tea*, I can see one person can make a huge difference,” sophomore Haki Kiema said. “Some girl from Pakistan will be educated, will make a difference in her community, because we helped her out. “It’s a really good feeling.”
In the frosty chill of an October morning, a handful of students gather along a well-traversed sidewalk on Michigan Tech’s campus. Each arrives carrying chalk, tape, and posters. They greet each other warmly, eye the steely skies, discuss the possibility of rain. Then they set to work.

Fifth-year mechanical engineering student Michael Senkow chalks a massive circle on the sidewalk. He stands back and claps the dusty residue from his hands. Around the exterior of the circle, he has written the group’s plea: “Sign if you are gay, lesbian, bisexual, or transgender. Allies, too.”

“The hope is that there’ll be so many signatures by the end of the day they’ll spill out of the circle and cover the sidewalk,” Senkow explains. “We’ll see.”

A few errant students stroll by; some ignore the visual display; others smile and nod or wave. A few linger nearby, watching curiously. The group continues to work, refusing to let the overcast sky dampen their spirits. Their mission is clear—to remove the stigma associated with the word “gay.”

What is it to be gay at Michigan Tech? Some people observe the University’s northern small-town setting and assume an underlying homophobic atmosphere; others view the close-knit family structure as a potential safe haven against such bigotry. In searching for the answer, one finds that the truth—acutely different for each student—often lands somewhere in the middle.

When scientific and technical communication major Stephen Jukuri began his career at Tech in 1984, he was still firmly in the closet.

“Coming out on campus at that time wasn’t really an option,” Jukuri says. “There were no support groups, no GLBT organizations. I had several boyfriends during my undergrad years, but we dated secretly—it was all very underground.”

Jukuri became involved with Michigan Tech’s student newspaper, The Lode, as a writer and eventually as editor-in-chief. It was during his editorship that Jukuri experienced one of the University’s most memorable homophobic displays—an anti-gay-themed letter-to-the-editor, quoting scripture and implying that AIDS is a consequence of homosexuality.

“We didn’t know how to handle it,” Jukuri says. In the end, editorial staff decided to cover the letter as a news story.

“The story generated a ton of feedback,” Jukuri says. “Much of it was positive, but not all. We got six letters supporting the writer—approximately a third of the total responses. It was disheartening but also very telling of the campus atmosphere at the time.”

Jukuri graduated in 1989 and left campus, returning several years later to pursue his master’s and doctorate in rhetoric and technical communication. During his absence from the University, Jukuri had come out to friends and family and begun a serious relationship with the man who would become his life partner.

“When I returned to Tech, the climate seemed to have shifted,” Jukuri explains. “Counseling and Wellness Services had created a new support group for gay and lesbian students.”

Jukuri and his partner, both originally from the local area, enjoyed the freedom of being able to return home and live their lives openly. He also admits, however, that it wasn’t all good.

“AIDS/HIV pamphlets showed up in my mailbox,” Jukuri says. “I was sent a page ripped from a magazine with the phrase ‘pellet guns, no permit required’ highlighted on it. I went to Public Safety, and when they asked how long the harassment had been going on, I told them, ‘my whole life.’”

Despite such displays of hostility, Jukuri maintains that he viewed Michigan Tech and the surrounding community as incredibly supportive.

“Since coming out, I’ve never felt the need to hide who I am. I felt safe because I was home. To the people who’d known me forever, I was exactly the same.”
Nicole Milkovic was already out—and proud of it—when she arrived at Tech. “I have two sisters, and they’re both lesbians as well,” Milkovic explains. “That conversation in my house started early. I think I was about nine years old when I first asked, ‘Mom, who am I supposed to like?’ I had a crush on a girl in my class and didn’t know quite what to make of it.”

Milkovic, a Detroit-area native now living in Florida, came to Tech in 2000 to study chemistry in the hopes of one day working to find cures for infectious contagious diseases. Now four years after graduation, she performs biochemistry and biophysics research at the Mayo Clinic in Jacksonville, striving to find a cure for Alzheimer’s Disease. “I’d wanted to go to Tech since I was a kid,” Milkovic says. “I was looking for a serious school, a place where I could focus on my studies. I liked everything about it.”

Milkovic adjusted easily to college life, meeting friends and immersing herself in her studies. But she admits that—like Jukuri—not all of her experiences were positive. “I lived in Wadsworth, and the girls on my floor knew that I was a lesbian and were really supportive,” Milkovic says. “But there were a few times when ugly, derogatory things were written on the whiteboard outside my room, or bibles were left outside my door. I was lucky to have such an understanding resident advisor and great friends.”

Two years into her studies at Tech, Milkovic became involved with Keweenaw Pride, Michigan Tech’s student organization for gay, lesbian, bisexual, and transgender individuals, and their straight supporters, termed “allies.” “I was so involved in my classes, I didn’t even know the group existed until halfway through my program, which is sad, really,” Milkovic says. “But I needed to find out who I was as an individual first—I didn’t want to be defined by a group.”

After joining Keweenaw Pride, however, Milkovic discovered that she really enjoyed the community it offered. She voiced her opinion on issues, helped plan activities like the annual drag show, sought funding for National Coming Out Week events, and volunteered with other group members to do painting and repair work on local homes.

“We can’t change people’s minds overnight, but we can educate the greater community.”

“I think sometimes people view the events Keweenaw Pride puts on as corny or unimportant,” Milkovic says. “But anything we can do to increase the dialogue is a step in the right direction. We can’t change people’s minds overnight, but we can educate the greater community, and ask people to open their minds a bit and participate. If sometimes that means offering silly or laughable entertainment, then so be it.”

With organizations like Keweenaw Pride, Michigan Tech and its students have made strides to further the progression of GLBT acceptance. Not long after Keweenaw Pride emerged, the University instituted the Safe Place Program, providing GLBT individuals with a database of student, faculty, and staff allies; currently, there are two hundred individuals registered. The Department of Housing and Residential Life also now includes a provision on its housing forms for students whose gender is in transition. “Progress is being made,” says Senkow. “But with such a small fraction involved in the Safe Place Program—is it enough?”

“Just because you’re not negative doesn’t mean that you shouldn’t also be positive. We love this community and we need your support.”
A
ter graduating, alumni stay in touch with classmates via emails, Facebook, or face-to-face visits. Six Tech cross-country and track alumnae reconnected by running a very long distance together.

Why?
“I wanted to see where we could go with more-challenging distances and an all-female relay team,” says Megan Killian ’05.

So, the six women competed in the 2008 Ragnar Relay, covering 187 miles in Washington state. Not only did the team finish first of the eleven all-women’s teams, but they finished eighth among all 142 teams competing—135 of which had up to twelve runners on their teams.

The former Huskies (and a friend) finished in 23:31.03, a 7:37-mile pace.

Margot Hutchins ’02 and Killian, both now doctoral students at Tech, first proposed competing in the Ragnar Relay after they were each part of a previous relay team. The next step was recruiting friends to complete their team.

Leslie Semler ’04, a geological engineer working in Duluth, was a natural fit to join the team. The former school record holder in the 10,000 meters frequently returns to the Keweenaw to compete.

Jessica Brakora ’04, who still holds the school record in the 800 meters and is a mechanical engineering student at the University of Wisconsin, was also quick to join.

Kendra Wolk ’04, a graduate student in veterinary science at Ohio State, was found through Facebook.

“Margot, Jess, Leslie, and I are, in a sense, surrogate sisters to each other,” says Killian.

Shortly after Katy (Bendall) Lindstrom ’06 joined the team she had to withdraw due to pregnancy. Samantha Carlson, a nonalum friend of Stemler’s from Duluth, stepped in to take the spot.

The team traveled to Washington individually and regrouped in Seattle. They stayed at the home of Adam Airoldi ’08, another alum of the cross-country team and “a great host,” according to Hutchins.

Due to the size of the race, the starts were staggered. The teams varied from high schoolers to post-middle-agers. The Tech team, the Mega Tough Ultra Chicks, had only one team starting behind them.

“It was helpful running from the back because we ran with different teams throughout the race,” said Hutchins.

“We were not sure how we were doing overall, but we knew we were doing okay. We kept passing people,” said Killian.

The team ran through the night using a head lamp.

“When you were running with the head lamp, you could only see three feet in front of you, which was nice because you had no idea what was coming up,” said Hutchins.

During the night, Wolk’s husband, Tom, drove a car next to the team van so the runners could “get a good hour of sleep.”

The race was run exclusively on roads and featured many tough climbs through the mountains.

The team, which wore pink shirts while running, picked up its pace as the race went along.

“Getting closer to the finish, I caught more people and got more energy,” said Killian, who ran the final leg of the race.

Overall Brakora ran the shortest amount (only twenty-six miles, nearly a marathon) and Hutchins ran the most (thirty-six miles).

“I think sharing the experience of traveling to a new place and doing something we all love so much was something we will have forever,” says Killian.

The sisterhood stayed strong at the end.

“We wanted to cross the finish line as a group,” adds Hutchins. “Kendra was too tired and sore, so Jess gave her a piggy-back ride!”
Let Them Stand On Their Own

By Marcia Goodrich

Acts 14:8-10—In Lystra there sat a man crippled in his feet, who was lame from birth and had never walked. He listened to Paul as he was speaking. Paul looked directly at him, saw that he had faith to be healed and called out, “Stand up on your feet!” At that, the man jumped up and began to walk.

Larry Golin is at Michigan Tech for his fiftieth class reunion, and he confesses that he hasn't seen many familiar faces on campus. This is probably because most members of the Class of ‘58 aren’t from Bangladesh, or Bengal, or Brazil, and most of them have two reasonably good legs.

Golin is walking a different road, one that began at Tech in 1956 with an overwhelming conversion experience. “I went to sleep, and when I woke up in the morning, my whole life had changed,” he says. “From then on, it’s been a blessing, and a blessing, and a blessing.”

He found himself called, both to spread the Christian gospel and to help the helpless, regardless of their faith.

However, it wasn’t immediately obvious that he should establish a mission to provide the poor of Bangladesh with artificial legs. After earning a BS in Forestry, Golin got a regular job as a state forester, but it didn’t take him long to find out he was in the wrong profession.

“I thought, ‘What in the world am I doing here in Hawaii, measuring these puny ohia trees?’”

Thus began his life’s work, caring for the handicapped and poor in East Pakistan, later to become Bangladesh. For the last forty-one years, Golin has provided physical therapy services there and throughout the world through his Ministries to the Disabled, with the support of his family, which he considers his greatest blessing: wife Jane, four sons, and two Bangladeshi daughters whom the Golins adopted after they were orphaned.

Thousands had lost their limbs during Bangladesh’s 1971 war of independence from Pakistan, Golin recalls. “There were so many amputees from the war, we needed to build a shop,” he recalls. “But we had a terrible time getting people to accept artificial limbs. I convinced one person to come in to be measured for a limb free of cost, but he never came back.”

The awkward wood-and-leather prosthesis was heavy, ugly, and didn’t hold up in the monsoon climate. “We realized it wasn’t good enough.”

Then he learned of a revolutionary new artificial limb developed in India, the Jaipur foot, and quickly adopted it. “People run with it, climb trees with it, pull their rickshaws with it, and it looks like a real foot,” Golin says. “The materials cost about forty dollars, and we can make one in forty-five minutes from local materials.”

In 1992, Golin and a group of dedicated Bangladeshi trainees opened their first artificial limb camp. A year earlier, a cyclone had swept through the disaster-prone country, killing 300,000 and injuring countless more. Many had lost their limbs to tin roofs slicing though the air.

“We had thirty-two amputees that came,” he remembers. “We fitted them with legs free of charge. They crawled in, and they walked out.”

The clinic provided services to everyone, regardless of faith, and gave Golin a chance to do what he’d wanted to do since he was a forester in Hawaii.

“It opened the door to talking to people about Jesus,” Golin says. “People told us, ‘We thought Christians were our enemies.’ We said, ‘The greatest humanitarian that ever lived was Jesus.’ Even the Muslims agreed that he’s a great prophet.”

Since then, his Ministries to the Disabled has established fourteen artificial-limb camps in Bangladesh and physical therapy clinics in nine other countries, where teams of medical professionals work together to help people with various disabilities.

They have also added an artificial knee joint developed at Letourneau University in Texas for amputees in the Third World.

“Now, everyone can do everything they did before they lost their legs,” Golin says.

“It should be everywhere,” he adds fervently. “Wherever there’s an amputee, there should be a limb they can walk with. And they should be able to hear the gospel, that God loves them so.”

Golin now spends more time managing and fund-raising for the Ministries to the Disabled than he does fitting amputees with artificial legs. And while it may seem that his BS in Forestry has sat on the shelf, it turns out that nothing you learn is ever wasted.

“With the help of the Bangladesh forestry department, we planted pinus caribea [Carribean pine] and pinus oocarpa [Mexican yellow pine or hazelnut pine] on about a quarter acre in 1982,” says Golin. “They grew thirteen-inches breast diameter and three logs high in only twenty-five years. We proved that pinus could be a commercial tree for fiber and lumber.”

Sometimes people ask him how a forestry graduate could end up ministering to amputees in the poorest corners of the world.

He smiles and says, “The Lord took me from one limb to the other.”
Larry Golin '58 holds the artificial leg he designs, builds, and gives away.
The news is spreading fast and far: Michigan Tech is addressing society’s important issues.

The work of Roshan D’Souza, assistant professor of mechanical engineering, was featured by the New York production company ScienCentral, which does science news pieces on National Science Foundation-funded research for ABC. D’Souza and his students found a way to use video graphics cards to model the progression of diseases and to better understand the human immune response.

David Hand, professor of civil and environmental engineering, was quoted in the Washington Post on the new water recovery system for the International Space Station. The story was distributed widely.

The Pittsburgh Post-Gazette included Michigan Tech’s railway engineering program in an October 14 story about unusual majors, titled “Some Schools’ Majors Fall Off the Beaten Path.”

In November 2008, the Detroit Free Press featured the YES! Expo in an article titled “Detroit Expo’s Video Games and Experiments Get Kids Hooked on Science.” Since 2004, Michigan Tech has been the chief organizer of the YES! Expo, which attracts thousands of middle- and high-school students each year.

Michigan Tech received high marks for academics, career preparation, and quality of life in the Princeton Review’s “Best 368 Colleges.”

The message is clear. Michigan Tech is gaining national exposure for its programs, its people, and its research. In fact, funded research expenditures have doubled in the last five years from $30 million to over $60 million. The National Institutes of Health (NIH), the National Science Foundation (NSF), and the US Department of Energy are just a few examples of organizations that have endorsed Michigan Tech through research grants.

The US Department of Energy’s National Institute for Climatic Change Research (NICCR) has gone beyond merely funding Michigan Tech research projects. It selected Michigan Tech—and only five other universities in the country: Penn State, Duke, Northern Arizona, and Tulane—to direct and manage NICCR’s regional research centers. As leaders of the Midwestern Regional Center, Michigan Tech faculty members in several departments review research proposals from other institutions and recommend which ones are worthy of funding. Through NICCR, Michigan Tech has funded over $6 million in climate change research projects.

What Drives Michigan Tech?

Our constantly changing and increasingly more complex world looks to the nation’s best research institutions to find solutions to its greatest challenges and to educate the next generation of problem solvers. As Michigan Tech’s research profile and the quality of its facilities, faculty, and students increase, we are prepared to meet these challenges head on.

Tech is seeking treatments and cures and researching better ways to diagnose diseases like cancer and osteoporosis and diabetes. Michigan Tech is addressing issues related to our physical environment—to sustaining earth, sea, and sky in spite of constantly changing climate conditions and the pressures humans place on them through pollution, land development, and progress. Tech is contributing to a tomorrow that depends less on fossil fuels and more on environmentally friendly, renewable, and sustainable forms of energy to keep us warm, power the engines in our automobiles and planes, and support life on the planet in countless ways.

Today’s global financial woes compel us to train a new generation of highly educated, technologically savvy, and talented people who will be ready to enhance the workforce, commercialize innovations, start new companies, and add to the economic vitality of society.

Through our programs and our research, we are also finding new ways to make life more enjoyable. Now, perhaps more than ever, the visual and performing arts enhance life and culture by providing a respite from our health and economic and environmental challenges.

What is the common thread that runs through all of our initiatives, ideas, and programs?
Technology.

Albert Einstein said, “It has become appallingly obvious that our technology has exceeded our humanity.”

People at Michigan Tech would argue that humanity, in fact, depends on technology for its enrichment and its survival. And at every turn, in every academic department, Michigan Tech faculty members and students—undergraduate and graduate—are developing innovative technologies to address every major challenge people in the world are facing today.

“Michigan Tech produces what the world craves,” says President Glenn Mroz, citing graduates in the STEM (science, technology, engineering, and mathematics) fields and innovative research: working on areas such as environmental sustainability, for example. Tech graduates a higher percentage of students in science, technology, engineering, and mathematics than any other Michigan university: 82.3 percent. “Michigan Tech is also one of the keys to Michigan’s economic future.”

Shaping the World Through Technological Innovation

Nanotechnology, a science of the ultra-small scale (100,000 nanotubes equal the width of a single human hair), has the potential to revolutionize everything from computing to space travel to health care. Enter Michigan Tech, where research in nanoscale diagnostics could change the way diseases are detected and treated.

“I like to think of it as ‘On-Star’ for the body,” says Professor Craig Friedrich, associate chair of Michigan Tech’s mechanical engineering and engineering mechanics department and director of the Multi-Scale Technologies Institute. “Just like wireless technology can communicate the condition of a vehicle, we might be able to do that for our bodies using nanosensors.”

Researchers and students at Michigan Tech are looking at ways to use carbon nanotubes for a variety of sensing applications. One example is a new way to monitor blood glucose levels in diabetes patients.

“Today, you can buy a pager-sized glucose monitoring system,” explains Friedrich. “Someday, we will be able to use nanosensors to determine the body’s chemical condition noninvasively using urine, sweat, or saliva because these substances have tiny concentrations of the same chemical markers found in blood. Sensors may one day be able to analyze a person’s basic health and then relay the information to health care providers using something similar to cell phone technology.”

Associate Professor Shuanglin Zhang, from Michigan Tech’s mathematical sciences department, is taking a different approach to finding cures from some of humankind’s most devastating illnesses. Zhang and his team develop statistical tools to isolate the genetic causes of disease. They have
identified eleven genes associated with type-two diabetes using a novel statistical method that first narrows the field of potentially dangerous genes and then determines which genes act on their own and which act in combination.

Zhang has authored or coauthored sixty papers in many of the top journals in his field. He has been the principal or co-principal investigator on over $2 million in research funding from the National Institutes of Health and the National Science Foundation.

Climate change is another of the global challenges being tackled by students and researchers at Tech. Andrew Burton, associate professor of forest resources and environmental science and director of the Midwestern Regional Center for the National Institute for Climatic Change Research, is conducting research that will allow climate change modelers to better predict the future—and to develop strategies to address problems before they emerge.

Burton’s research, with a local focus and international implications, deals with measuring the effects of soil warming on the root systems of trees. Michigan’s Upper Peninsula is the ideal place for conducting forest-based research.

Since we depend on trees for the air we breathe, explains Burton, it is important to know if they are increasing their output of carbon into the atmosphere when the soil is warmed due to climatic change.

“So far it looks like good news,” Burton says. “Our research is suggesting that trees can acclimate themselves to new conditions without adversely effecting the atmosphere.”

Another important role Michigan Tech plays in solving today’s challenges dates back to the early 1900s when Tech developed new programs to respond to the boom in the automotive and chemical industries. Today, Tech researchers and students are looking to revolutionize the transportation and power industries by investigating ways to create biofuels from the abundant woody biomass in the region, by exploring ways to use highly efficient thermoelectric generators to harvest waste heat and create “green” electricity, and by designing new engines and new vehicles.

A research project that could lead to the development of an internal combustion engine that will continuously adapt to different fuels, environmental conditions, and engine conditions is being conducted by Jeffrey Naber, associate professor in the mechanical engineering-engineering mechanics department. Naber, an expert who worked in the automotive industry in research and development before joining the Michigan Tech faculty in 2004, is hoping to develop advanced engine technologies that will both advance flexibility and reduce emissions. To do so, he is building a $2.5-million combustion chamber—the only one of its kind in the world—to study the development of real-time, event-by-event combustion feedback methods.

“If all goes well, adaptable combustion engines could appear as soon as 2011,” says Naber.

While programs such as mathematics and chemistry, biological sciences and physics in Tech’s College of Sciences and Arts are natural places to look for technological innovation, the College is also committed to incorporating it into less-obvious programs. The visual and performing arts, for example, distinguish themselves from programs at other universities by taking a technology-driven focus.

“Whether they realize it or not, people in society today have much higher expectations of the arts because of technology,” says Mary Carol Friedrich, associate professor of theatre and director of design and technology programs in the visual and performing arts department. “Technology creates a wonderful world. Sometimes it’s subliminal and sometimes it’s obvious, but technology enhances the entire theatrical experience.”

Michigan Tech faculty members and students are shaping the world of drama by providing programs that balance the aesthetic with the technological.

“All of our students take courses in the School of Technology or in computer science, depending on

Associate Professor Andrew Burton and Research Assistant Lynette Potvin look at root samples culled from global change experiments.
their area of emphasis,” Friedrich explains. “They come to Michigan Tech because they know they will get hands-on experiences in all the technical aspects of theatre as well as traditional training in acting, set and costume design, and lighting.”

“We create programs that take advantage of what the university does well,” adds Friedrich. “Stories can be made richer with technology. Michigan Tech graduates create the technology that becomes the subtext that enriches the story.”

Create the Future

Michigan Tech has become a place of consequence. Our research engine is bringing in more external funding each year. We are attracting world-class researchers and top-notch students. We are partnering with some of the nation’s household names in business and industry: Dow, Kimberly-Clark, NASA, Rockwell Collins, and Michigan’s big three automakers.

Our technological expertise is evident in a number of other ongoing and exciting research projects:

- Alex Mayer, geological and mining engineering and sciences, is leading a National Science Foundation-funded team of researchers to predict freshwater availability over the next thirty years.
- L. Brad King, mechanical engineering-engineering mechanics, is recognized internationally for work involving ion propulsion, which could be used to power tiny rocket engines to change satellite positions.
- Tess Ahlborn, civil and environmental engineering, is working on creating “super concrete,” a material that could be used to build bridges that last 500 years.

Our signature Enterprise programs have yielded results for their industry and technology partners. Students in the Aerospace Enterprise, for example, created a new dust-removal system that could potentially repel lunar dust to make space travel safer. Students in the Innovative Castings Enterprise are developing new technologies for companies that manufacture cast metal products ranging from engines to faucets.

Finally, our alumni, who espouse the ingenuity and responsiveness that sets Michigan Tech apart, are doing their part to contribute to Tech’s international reputation as an institution where important work is going on and where the next generation of leaders in technology are being inspired and educated.

“The great thing about Tech is that we know what we are good at: hands-on, practical knowledge,” says David Reed, vice president for research. “Tech leverages what we do well and our historic strengths in science and engineering when we partner with federal agencies, business and industry, other institutions, and the state.”

“That’s the reason we are attracting great new faculty members and students, why we have more corporate partners than other institutions in the state, and why we are recognized for our ability to create and commercialize practical solutions,” Reed continues.

“Reinforcing it all is our strong student emphasis—on providing undergraduates and grad students with a discovery-based hands-on education. Because of our students, our faculty members, and our partners—as well as our focus on producing interdisciplinary solutions to society’s great challenges—our potential impact is great and will continue to grow.”

So where do we go from here?

“The problems the world is facing are more and more complex and will require more and more breadth in the terms of the expertise needed to solve those problems,” concludes Reed. “When we look at society fifty years from now, the biggest issues will be alternative energy sources and the availability of fresh water. At Tech, we will continue to seek experts—and educate future experts—in these as well as other fields. We will reinforce our capacity for bringing people together across all disciplines of science and technology to solve whatever challenges the future holds.”
A Booming Bear Market

Inside every chunk of white cedar, there’s a bear (or an eagle, or a gnome, or a Sylvester the Cat) struggling to get out.

And Chad Denkins is just the guy to set them free.

Denkins, a business administration major studying information systems, has been making ends meet at Michigan Tech by firing up his Jonsered on the weekends and carving everything from sports-team signs to cartoon cats. A six-foot Betty Boop was his weirdest commission; bears are a perennial favorite. “I make them cute,” he says. “Sometimes they are baby bears, or with little sad faces.”

He dons safety goggles, ear protection, and a pair of serious-looking chaps, and prepares to give a short lesson in chain saw artistry. Carving bears, et al., may be a wacky way to work your way through college, but Denkins is all business as the chips fly where they may throughout his Hancock backyard. Cut by definitive cut, an earnest little bear begins to take shape.

Denkins has been surrounded by chain saw sculpture since he was a child growing up in Cooks, Michigan. “My dad’s a carver, and I learned from him,” he says. “He’s been carving for about thirty-five years.”

He got his start when he was fifteen, making a snowman for his grandfather’s birthday present. Five years later, Denkins has graduated to custom carvings soaring six feet and higher and shows his work alongside that of his father, James, who is among the top chain saw artists in the nation.

What does Denkins get for his work? From sixty or seventy dollars for a simple bear to several hundred for an elaborate sculpture carved into an eight-foot-high standing stump. It’s not all profit; maintaining a stable of high-end chain saws in mint condition isn’t cheap, and neither is driving to job sites throughout the UP.

But it has its advantages. It covers Ramen noodles, books, and gas money. “And I don’t have to work eight to five,” Denkins notes.
I worked at Wolverine World Wide in Rockford, Michigan (makers of fine Hush Puppies shoes). I never had to handle the raw pigkins, but can't say the same about the cow hides. These hides had bits of meat, fat, etc., still clinging to them, and of course the flies loved them (lots of fly eggs and their hatchlings around). For some reason, I was the only girl ever willing to do this job. :-)

Carla Martinek ’88

As summer approached, and being very short of money, it occurred to me that if I could get a summer job in Houghton I could avoid transportation home to Toronto.

I visited the mayor and asked if the town had any work available. The mayor asked me if I'd like to be a town policeman. “You bet” was my quick answer. Minutes later I was interviewed by Chief McGuire—a great guy.

About two hours later, I trudged back along College Avenue to my place carrying a police hat, badge, newly acquired blue pants and shirt, and a gun belt with bullets, as well as a .38 caliber Smith & Wesson revolver!

The '57 Chevy police car had no radio, so I was told to watch out for a yellow overhead light on Sheldon Avenue, which indicated a request for police attention.

Loved every moment of the job, including the first call to the fire hall. “There’s a rat in Mrs. Smith’s toilet,” the fireman told me. I argued that this was a fireman’s assignment, not a police officer’s. No luck!

Over the years I have told this story many, many times and haven’t met anyone who believes me. But it did happen, and I didn’t even have a Michigan driver’s license.

Grant Nuttall ’59

I was fortunate enough to get employment working underground in an iron ore mine, tramming iron ore, the summer following my freshman year. During the school year, a part of my football scholarship was a job at the ROTC supply. People who wore a 9B shoe didn’t realize they could also get into an 8-1/2 D when “push came to shove.” I was able to leave Tech in four years, not owing a soul a dime, and with one-hundred dollars in my pocket.

Jim Ombrello ’58

During the summers before and after my freshman year, I worked part-time at a funeral home. I mostly parked cars and set up chairs for funerals, but I also did many a removal (the term used for picking up the body of the deceased) and often drove the hearse to the cemetery.

Rick Stevens ’87

Working in a sausage factory.

“You've heard the saying, “You are better off not knowing how sausages and laws are made,” right? Well, I can vouch for the first part!

Mike Burden ’89

I spent two summers “living” in 1870 at Fort Wilkins [in Copper Harbor] portraying the post laundress. During the days, we lived, dressed, acted, and spoke to visitors like it was the summer of 1870. The guy portraying my soldier husband that year was my fiance. Visitors would ask us “Are you really married?” And we would wink and say “yes, in about six weeks.”

Peggy Barchi ’85

During November, the herring were in, and the fishermen needed help removing (“choking”) the herring out of the gill nets.

November on Lake Superior is indeed memorable. Working on a boat drifting through five-foot swells is a real rock-and-roll experience.

Mel Visser ’59

I visited the mayor and asked if the town had any work available. The mayor asked me if I’d like to be a town policeman. “You bet” was my quick answer. Minutes later I was interviewed by Chief McGuire— a great guy.

Peggy Barchi ’85
The cadets of the Army Reserve Officers’ Training Corps have been marching to their own cadence on campus and serving their country around the world since 1928.

The initial Army ROTC program combined military training with course work and study. According to an early promotion, the program “gives the student a training, which is valuable to him in his industrial and professional career, as it would also be, should the nation call upon him to act as a leader in its defensive forces.” While enrollment in the unit was completely voluntary, more than 140 students applied for admission, with 98 men selected for the 1928-29 academic year. By 1940, the unit included more than 300 men in its program, fully one-third of all enrolled students.

The course of instruction comprised four years and was divided into a two-year basic course and a two-year advanced course. Students in the program were considered cadets in the Army (just as those at regular military academies) and formed their own Cadet Corps, consisting of one engineer battalion of three companies and a band.

In addition to regular academic curricula, cadets also undertook specialized courses in the department of Military Science and Tactics taught by Army officers. Courses offered in the early years included

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By Erik Nordberg, University Archivist

Above: 1928 Army ROTC officers.
Above right: The 1936 Military Band.
Top: Rookies marching on campus in fall 1939.
rifle marksmanship, map reading, combat principles, bridge and road building, and military administration.

The cadets and officers were close. James Westwater ’34 was editor of The Lode when Sergeant Philip O’Brien’s wife delivered twins. “We ran a headline: ‘Pair of Recruits Report to Sgt. O’Brien,’” he remembers.

During the fall and spring terms, drills were held twice a week on the campus. According to the 1930 Keweenaw yearbook, practical work in the winter term consisted of “map and sand-table problems, knots and lashings, and shooting on the gallery range with the Springfield .22 caliber rifle.” Most winter terms included some type of cold-weather maneuvers.

At the end of the second year, cadets were assessed on their progress and selected to move on to the advanced course, including a six-week summer camp, usually hosted at Camp Custer in Lower Michigan or at Fort Sheridan in Illinois.

Cadets accepted into the advanced course also received $9 per month from the government, travel allowance, rations, and food stipend for the summer camp trip.

“That was a fair amount of money in those days,” recalls Joseph Albert ’36. “You have to remember that the country was deep into The Great Depression, so that money helped a lot.”

Several student organizations spun off from Army ROTC. A rifle team was organized in 1928, drilling in an unheated rifle range scratch-built in the attic of the Club House building (currently the ROTC building). A new range in the basement of the Library Annex building was in use by 1938. The rifle team participated in matches with the local American Legion Post and the ROTC unit in Calumet, as well as intercompany shoots organized in Ohio and Indiana.

A chapter of Tau Nu Tau, an honor military engineering fraternity, was organized in 1930. Aside from its formal aims, “the TNT” also undertook some less-serious activities including, according to the 1938 Keweenaw, “an attack on the Haas Brewery, the capture of the University of Michigan hockey team at the Douglass House, and the Battle of Redridge.”

ROTC also encouraged another Michigan Tech tradition—its band. Founded in 1928 by Arthur Kitt, the Michigan Tech band initially included ROTC and other students. By 1938, the unit was comprised entirely of cadets and known more generally as the “Military Band.” Membership in the group was voluntary, but due to its popularity included a highly competitive audition process.

“I played the French horn in the band and it was a nice diversion from our studies,” explains Charles Alvord ’39. “If you didn't have something like the band, there wasn't a lot to do other than trigonometry or calculus.”

The band furnished music for the annual spring military inspection, parades, sporting events, and other occasions requested by the college president. It also presented public concerts at the Kerredge Theatre in Hancock and broadcast its first radio program from station WHDF in 1932. Kitt also organized a separate drum and bugle corps, and the student band members founded an honorary band fraternity, known initially as Tri-Beta, in 1932.

Many of the alums fondly recall their ROTC days and their impact on them. Albert became a career Army man. “If you look at our nation's history, there has always been a need for military personnel,” he notes. “ROTC training allowed me to come into the service at a much higher level than I could have during the draft.”

Westwater valued the additional skills gained through the specialized training. “ROTC included a lot of hands-on civil engineering training with bridges and earth moving. Although I was training to be a mining engineer, ROTC gave me firm grounding in civil engineering aspects of the work.”

Alvord sums it up pretty simply: “Being involved with ROTC and serving my country in World War II was the most fabulous, fantastic experience imaginable.”
Gerald Ziarno ’59 has been a steward of his alma mater for more than thirty years. One of his major priorities is the endowed scholarship for graduates of Nouvel Catholic Central High School in Saginaw, in particular for those who want to study in science, technology, engineering, and math (STEM) disciplines at Tech. He and his wife, Yoshie, have also supported Tech through annual giving and their estate plans. “I want to contribute and to encourage people to give to Michigan Tech,” he says. “I have always felt that you give back to what helped make you.”

That ethic has entailed extensive involvement and recognition. Ziarno is a member of the Electrical and Computer Engineering Academy and a life trustee and past president of the Michigan Tech Fund. He has received Tech’s Distinguished Alumni Award and is a member of the McNair Society, which honors donors who provide for the University through their estates.

Ziarno graduated with a degree in electrical engineering. His goal at the time was simply “to make a living.” While on campus, he was in the Newman Club (now Catholic Campus Ministries), the Air Force ROTC, and Kappa Delta Psi Fraternity. One of his fondest memories of his college days was being a member, and president, of the Blue Key National Honor Fraternity. “I learned management skills and how to run a team,” he says, “get people to cooperate and accomplish.”

After graduating, he served three years in the Air Force in Japan. He started working for Dow Corning in 1962 and remained there the rest of his career. He retired in 1996 as corporate vice president and executive director of marketing and sales.

Ziarno visited campus in October and was encouraged with the current leadership at both the Michigan Tech Fund and the University. “I am favorably impressed with the harmony that exists among all the efforts,” he says. “I thank all involved for pulling together and working together.”

Ziarno, who attained international stature in industry, espouses a rock-solid maxim: “If you have a product,” he says, “and you believe in what you’re doing and what you’re selling, you’re going to succeed.”

He did exactly that during his distinguished career at Dow Corning, and he continues to do so at Michigan Tech. He cochairs the 2009 effort to solicit gifts from the Class of 1959. It’s a sure sell because he believes there is a pervading sense among alumni that Michigan Tech continues to do first-rate and important work.

“Tech continues to turn out very well-prepared and educated people. It is doing whatever it can to prepare students to go out in the world and work for companies struggling to be competitive on an international basis.”

America needs leadership in STEM, he says. “The US is experiencing a dire shortage of home-grown professionals being educated in these areas. We need to do a better job of getting young people to enter these careers.”

Ziarno has a global perspective, working abroad for Dow in Europe, Latin America, and Asia. He also has traveled to more than seventy countries to indulge one of his abiding avocations—his wife calls it “a mania: studying, looking at, and chasing birds.” This fall, he was planning a trip to Antarctica to “see penguins and other stuff down there.” He’s even co-authored A Birder’s Guide to Michigan.

Meanwhile, like the birds of the air, he helps Michigan Tech take wing.
The Pride of Pastyland

I suppose that when one goes to dinner with the trustees and administrators of a university, the student music provided usually consists of a string quartet softly scratching out Haydn or Mozart. But I wasn’t really surprised when, while attending such a dinner at the Rozsa Center during Homecoming, a scruffy group of hobos burst in accompanied by a loud drum cadence. This was none other than the 252-member Michigan Tech Huskies Pep Band, known and loved by Tech students and alumni the world over. We were treated to their renditions of “Also sprach Zarathustra” and the “Huskies Fight Song.”

Whether you believe President Glenn Mroz, who claims he invited the band to the soiree, or Pep Band Director Nick Enz, who alleged that the Cream of the Keweenaw “crashed the party,” the delight on the faces of those attending was undeniable. No one should have been surprised to see the Pep Band there. Everyone present knew that this is Michigan Tech, and we’re going to do things a little differently.

The dinner at the Rozsa was attended by David House ‘65 and Pep Band alumnus, who presented Michigan Tech with a $10-million donation, the largest gift in Tech’s history. House, who led the team that developed the Pentium processor and came up with the “Intel Inside” marketing campaign, is chairman of Michigan Tech’s national fund-raising campaign. This campaign will help assure Michigan Tech’s future as a top-tier national technological university.

Great things are already happening on this campus. The state of Michigan has authorized $25 million for a Great Lakes Research Lab to be built on campus. University enrollment is over seven thousand this year. Research funding coming in to Michigan Tech in 2008 is in excess of $43 million. The list goes on: the Michigan Tech Research Institute in Ann Arbor, the Pavlis Institute, Peace Corps Master’s International programs, Enterprise programs, and more.

Great things are happening with the Michigan Tech Alumni Association as well. Our national Gamewatch events for Michigan Tech-Northern Michigan football hosted over 700 attendees. HuskyLink now has over 10,500 registrants. An Alumni Update event is in the works for faculty to provide reunion attendees with info on what is happening in their departments. The Board is having discussions concerned with developing alumni service travel and learning vacations. (See information at right.) We’re also working on a Young Alumni event to be held on campus during Homecoming.

So, stay in touch, there’s a lot more coming your way. Connect with us via HuskyLink and stay informed. We hope to energize you through relevant programming that will connect you with your University and your Alumni Association. Oh, and support the Pep Band whenever your path crosses theirs. The Pride of Pastyland deserves no less.

Mark Mitchell ’77
President
Michigan Tech Alumni Association

Regional Alumni Event Schedule

2009

January 6–7
Scottsdale and Tuscon, Arizona
Tech Connect

January 10
Denver, pregame event
Hockey vs. Denver

January 23
Anchorage, pregame event
Hockey vs. Alaska-Anchorage

February 4–7
Winter Carnival

May 2
Spring Commencement

June 26–27
Houghton
Michigan Tech Tae Kwon Do Reunion

August 6–8
Houghton
Alumni Reunion

For up-to-date listings of alumni events visit alumni.mtu.edu.

Join Us in Ghana

Alumni are invited to join students in the Pavlis Institute for Global Technological Leadership when they travel to Ghana on July 1, 2009. They’ll work on a variety of projects designed to make a difference in the lives of the local populace while providing students with opportunities to develop their leadership skills. For more information, check out page 4 or contact Brenda Rudiger in the Office of Alumni Relations 1-877-688-2586, brudiger@mtu.edu.
The Magic Man

Fresh out of Tech, Joel Tacey ’01 was not enthused by his first marketing or sales rep option. So, he gave himself an ultimatum. “I told myself, if I could make the same kind of living by doing magic as my friends did in traditional jobs, I would stick it out,” he says. “It’s been the best decision of my life.”

Now, through Tiptop Entertainment, his family-brand of magic (“card games and visual stuff”) has vaulted him to performing at Red Wings games, the Super Bowl, and the All-Star Fan Fest during baseball’s All Star Game.

He’s found his niche in four areas while growing his revenue each year, he says.

“I offer a Just for Fun Show Series and a Laugh and Learn Show series, delivering positive messages for younger children; Game Fest, running video game contests for teens; and the High Five Guys, performing with Michigan’s only stilt-walking troupe!”

The stilt walking was learned at Tech during Parade of Nations, Carnival, and other events. In fact, honing his magic skills during his Tech days allowed him to graduate debt free.

Today, Tacey works school assemblies, library programs, festivals, and fairs, while also marketing his magic skills at events, trade shows, and conventions.

As for tomorrow: “I want stability and income whether the economy is good or bad,” he says, something many people are saying these days. Odds are, Tacey will pull that rabbit out of his hat.
The Latest Survey Says . . .

This past May, more than 1,400 alumni responded to a web-based survey designed to determine the institutional and individual core values of the target audiences who know the University best.

**Overall Perceptions**

- Respondents consider their alumni experiences to be positive thus far, as the majority indicated they were “good” to “very good.”
- Alumni perceive Michigan Tech as a good or top school, rating it as a “very good” institution with very few (4 percent) even considering it average.
- More than two-thirds of alumni would recommend Michigan Tech without any reservations.
- When asked how well informed they feel about what is happening at Michigan Tech, 54 percent say they are “somewhat informed” and 43 percent “very informed.”
- Encouragingly, two-thirds of alumni are aware of the University’s online alumni community—HuskyLink. Of those aware, the majority are members (71 percent).

Finally, respondents indicated they felt it was important for them, as alumni, to stay informed about Tech, identify job opportunities for graduates, serve as ambassadors for the University, make a financial contribution to the University, assist in the recruitment of students, network with other alumni, and mentor students.

The data collected in this survey, which also included prospective students and their parents, and current students, staff, and faculty, provides important information about perceptions of Michigan Tech.

Save the Date for
Alumni Reunion 2009

Michigan Tech’s 2009 Alumni Reunion will take place on campus August 6–8. Featured classes will be the Golden M’s (those who graduated fifty-plus years ago) and the classes of ’59, ’69, ’79, ’84, ’89, and ’99. We will also be hosting a Huskies women’s basketball alumni reunion. We recommend that you book your travel and accommodations early. Visit www.alumni.mtu.edu/reunion for event details.

They’ll create the future. You can help.

Your support to the Michigan Tech Annual Fund can have a huge impact: helping our students create the future.

By gaining an education in the best Tech tradition, they’ll be prepared for whatever comes their way in their careers and in their lives.

And you’ll gain satisfaction in knowing that you helped make it happen.

You can visit the website www.mtf.mtu.edu/give, call toll-free 877-386-3688, or mail your gift to the Michigan Tech Fund, 1400 Townsend Drive, Houghton, Michigan 49931-1295

Give every year. Make a difference every day.
“Although not exactly dirt-poor, I needed part-time work to pay expenses while at Tech,” Chuck Hand ’62 remembers. “Earning a degree in electrical engineering with a power emphasis has provided me a stimulating and satisfying career. Much of my life’s work has involved gigantic gas-insulated substations (GIS). Currently, I am working on a nine-figure GIS project, part of an electrical network that delivers power to Southern California from as far away as the Columbia River.”

Why this career choice? “Because of Sputnik in ’57, most students gravitated to electronics and control systems—the space-age stuff,” he says. “Electrical power professors Walt Anderson and Joe Roman helped me to take these first steps toward a path less traveled. Only four in my class selected electric power. It’s made all the difference, and now I want to give back.”

Hand pays it forward by supporting scholarships and recruiting undergraduate and graduate students. “The jobs are waiting,” he says. “More student engineers need to be introduced to the exciting, challenging electrical power business.”

And you can see the world.

As a consultant to Southern California Edison, Hand’s work has taken him to Canada, France, Germany, Italy, Japan, Sweden, Switzerland, and throughout the US. He is presently on a team developing the national standard on GIS.

With his wife, Doris, Hand lives in Orange County, California, overlooking Disneyland and Catalina Island. He volunteers with the Boy Scouts, and for twenty-three years he has been involved locally and internationally, camping in Korea, Chile, Holland, and North America. The Boy Scouts honored Hand with the Silver Beaver “for distinguished service to young people.”

During a recent visit to Tech, he was impressed by the enrollment—nearly tripled since he matriculated—and the facilities. “They’ve modernized considerably from a single 10,000 vacuum-tube digital computer that occupied a large office,” he says.

Hand enjoys his work and knows he made the right career choice. He now seeks to power up the careers of newly minted Tech graduates.
In 1999, this Habitat for Humanity group bundled up for a long night in the great, Michigan Tech, outdoors.

Merle Potter ’58 was awarded the American Society of Mechanical Engineers 2008 James Harry Potter (no relation) Gold Medal. Potter received the award “for making a renowned impact on thermodynamics through forty-two years of outstanding teaching and through published textbooks on thermal sciences and applied mathematics, and for research on energy consumption in dwellings and industrial plants.”

Potter earned a BS in 1958 and an MS in 1961 in Engineering Mechanics from Tech and a master’s and PhD from the U of M. He joined MSU in 1965 as an assistant professor of mechanical engineering, becoming a full professor in 1974. He retired in 1998 and continues to write.

He has written numerous research papers and has authored and coauthored twenty-six textbooks and exam-review books.
Janet Murgittroyd ’63 retired to travel, gardening, kayaking, sailing, and bridge, and would love to hear from fellow “toots.”
(You can send Janet a note through the online directory in HuskyLink, www.huskylink.mtu.edu.)

Michael Russo ’69 has been named executive secretary of the AEEC, an association of airlines and aircraft manufacturers that develops ARINC Standards for avionics and cabin systems. Mike recently celebrated thirty years of employment at Aeronautical Radio Inc. in Annapolis, MD.


Douglas Schurig ’73 has retired after a thirty-five-year career with American Motors and Chrysler, most recently as the national operations manager for fleet remarketing operations in Auburn Hills, MI.

Alan Sabin ’76 is the operations manager for Caterpillar at the Perkins Power Systems Technologies Co. (Wuxi) Ltd. in Wuxi, Jiangsu Province, China. He and his wife, Shar, have lived in China for two years in Shanghai and Suzhou.

Warren Brown ’79 is president of Echo Valley Safety Consulting LLC in Niles, MI. Warren was previously senior safety manager with Carrier Commercial Refrigeration.

Michael Sekely ’80 has recently been promoted to northeastern US division operations manager for Weyerhaeuser Company in their wood products distribution division. Michael is in his twenty-sixth year with the company and just recently moved to Marquette, MI, with his wife, Jeanne. Also, both of their children are now Michigan Tech students! Jill, a senior, and Clay, a freshman.

Capt. Jeffrey Paradee ’81, CEC USN, is in a one-year deployment in support of Operation Enduring Freedom, Kabul, Afghanistan, as director of engineering for Combined Security Transition Command-Afghanistan.

John Travis ’82 announces the birth of Liam John Travis on 11/4/07. In training to be a Huskies goalie already!

Kent Blossom ’83 has been named vice president, trusted identity solutions, at IBM. He leads a global team of complex identity management specialists from his office in Wilmington, NC.
Michael near the California home they have made with children Jessica, Daniel, and Michael. His wife, Naomi, is an electrical engineer working at the Jet Propulsion Lab as a senior materials engineer. The exciting part, he says, is introducing new products to the market.

That career involves product development for 3M, specializing in orthotics and prosthetics. Palmer remembers fondly those days at the Douglass House and some special Tech professors: Dick Heckel and Angus Hellawell. “Those were my toughest classes,” he says. “I thought I didn’t understand them, but, in my career, I fall back on those classes for how things work.”

That career involves product development for 3M, specializing in orthotics as a senior materials engineer. The exciting part, he says, is introducing new products to the market.

His wife, Naomi, is an electrical engineer working at the Jet Propulsion Lab near the California home they have made with children Jessica, Daniel, and Michael.
Megin (Agostinelli) Dressel ’00 and Peter Dressel announce the birth of Joseph Frederick on 3/10/08, welcomed home by Isaac.

Benjamin T. Gerold ’98 and Laura A. (Arlt) Gerold ’00 announce the birth of Daniel Thomas Gerold, on 4/24/08. His big brother, Kile, is very happy with the new addition. Laura was awarded the Wisconsin Young Civil Engineer of the Year Award 2007 by the Wisconsin Section of the American Society of Civil Engineers (ASCE).

Dennis Popma ’00 and Agnieszka Lajewska were married in Hamburg, Germany, at a civil ceremony on 8/12/08 and also at a religious ceremony in Gdansk, Poland, on 10/11/08. Dennis is a strategic controller for Autoliv in Hamburg, where the couple resides. Agnieszka is a junior marketing and sales manager for Medac in Wedel, Germany. Dennis is earning his MBA with Nordakademie, which he will complete in June 2009.

Bryan MacKenzie ’01 lives in Cypress, TX, working for Enbridge Energy, managing numerous projects across North America. Beth and daughter, Ava, are doing very well, spending most of their summers visiting Upper Michigan and traveling the rest of the year to see friends and family throughout the country.

Karen Owens Lannom ’01 recently moved to Plymouth, NH, with her husband, Keith, and son, Bryce, for Keith’s new job as deputy forest supervisor for the White Mountain National Forest. Karen continues to work remotely as a research associate for the University of Tennessee.

Brian Bickers ’02 and Debra Bickers announce the birth of Collin William on 3/3/08.

James ’02 and Amanda (Wilmoth) Salliotte ’02 have two future Huskies at home. Andrew James was born on 4/14/05, and Madilyn Delaney was born on 11/15/06.

Bridget Cannon ’03 and Matthew Walsh were married on 4/5/08 at St. Bernardine Church in Forest Park, IL.

Travis Pegg ’03 with fiancé, Kathleen, and dog, Rocco, have recently moved to Cedar Rapids, IA. Travis will be working for FPL energy at the Duane Arnold Energy Center as the systems engineer responsible for the emergency diesel generators.

Mark Anderson ’04 and Deirdre Johns ’04 were married on 7/19/08 in Marquette, MI.

Kevin Soper ’04 recently relocated with his family to Brentwood, CA. He took a transfer within Dow and is now working as a production coordinator in the Chlorpyridines Complex at Pittsburg, CA.

Carl Jarema ’06 married Cindy Kurc ’06 on 8/16/08 in Alpena, MI. They now live in Plymouth, MI.

Kathryn (Price) Sterk ’07 and Daniel Sterk ’07 were married on 3/10/07.

Tom Bartlett ’08 is working at Union Pacific in Omaha, NE. He designs circuits in the train yard and interned at Union Pacific while he was at Tech.

Undergrad Discovers Rare Puffball
Brad Morse, a third-year mechanical engineering student, collected a large puffball and brought it to his work-study supervisor, Research Scientist II Dana Richter of the School of Forest Resources and Environmental Science. Richter investigated, and the specimen turned out to be the western giant puffball, usually found in sagebrush areas of the western US. The species had never before been documented in Houghton County and was identified only once before in eastern North America. More specimens were collected and compared microscopically and culturally to the common eastern giant puffball. Together, Richter and Morse describe their discovery in “The Western Giant Puffball (Calvatia booniana) in Northern Michigan,” published in The Michigan Botanist, Vol. 47, No. 2 (2008).
In Memoriam

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

1933
Dr. Robert H. Davis

1936
Arne E. Uitti

1937
Roger N. Townsend

1938
Edward L. Sibilsky

1939
John M. Dobovan

1940
Percival J. Cox

1941
Herman W. Copony

1942
Wilber R. Johnston
John L. Sharrer
Col. Fred M. Walker Jr. PE

1943
John W. Crandall

1944
Dr. Frederick W. Bryant

1946
Paul H. Kahelin

1947
Thomas H. LeCompte
Philip S. Lund
Donald R. Oksa
Peter A. Pessoa
William E. Thackham
Roy P. Tidman
William C. Turnbull

1948
Donald E. Joupperi
Rev. William H. Padgett Jr.

1949
Raymond R. Bogdan
Melvin L. Bunting
Joseph M. Ferrell Jr.
Burd Hikes
Levi R. Marttila
Albert J. Mickus
Bernard C. Penokie
George D. Rehnquist
Clarence A. Sorensen
Phyllis F. (Fowle) Towner

1950
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