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On the cover: If it weren’t for J. Parke Channing, Michigan Tech might not be celebrating its 125th anniversary. In this issue, archivist Erik Nordberg profiles Channing and his better known counterpart, Jay Hubbell.

Inside cover: With only a few months of open water during the school year, Michigan Tech’s crew team gets out to practice in the pre-dawn hours.

We welcome your letters and are publishing some of them online. Read comments on the fall Michigan Tech Magazine at www.mtu.edu/magazine/winter0910/stories/letters/.
A Bandaid can help heal a cut, but it won’t hold America’s infrastructure together. What we need, says Bruce Seely, is a new way of thinking about—and paying for—the transportation systems that enable today’s—and tomorrow’s—society and economy to function.

Seely, dean of Michigan Tech’s College of Sciences and Arts and a historian of technology, is an expert on infrastructure. In fact, he wrote the book, *Building the American Highway System: Engineers as Policymakers*, which examines the topic, and he has testified before Congress about infrastructure issues.

What is infrastructure? It’s mass transportation, the electric power grid, telephone lines and cell phone towers, and water and sewer systems. And roads. The interstate highway system, conceived in the 1930s, begun in the 1950s, essentially completed in the 1990s, is a poster child for infrastructure: a big, complex, expensive network that determines the scope and direction of present and future economic development.

Transportation infrastructure—not just highways, but rail, air, and water transportation systems—is a future investment, Seely recently told the US Senate’s Committee on Environment and Public Works. “Where you build a system, and how you build it, determines what people can and will do for a long, long time,” he points out.

Infrastructure both enables and constrains, Seely says. “Access or no access not only marks where development will take place, it limits and defines your options. Decisions made today are going to impact us in the future in ways we can’t even imagine.”

Take the interstate highways. They were a long time on the drawing board. Congress authorized—but did not fund—the interstate highway system in 1944. And highway engineers had started planning a network of highways connecting all sections of the nation a decade earlier.

By the time Congress funded the massive project in 1956, the engineers and their heavy construction machines were ready to roll. Their mandate, as they saw it, was to build the new road system as quickly as possible, and they responded to that challenge by slicing through urban neighborhoods and parklands, displacing people, trees, and wildlife habitats indiscriminately.

The resulting pendulum swing was predictable, says Seely. Politicians wrested control of the interstate system from the engineers and kept it for themselves.

That wasn’t all bad. The Highway Beautification Act of 1965, a pet project of Lady Bird Johnson, brought aesthetics to roadsides across the nation. Environmental impact studies put the brakes on some ill-conceived projects.

But, in the hands of the politicians, the decision-making process inevitably became more and more politicized. “Roads changed from an investment in our social and economic future to a piece of pork,” Seely says.

Now he’s concerned that the infrastructure this country needs to compete in a global future is taking a back seat to “bridges to nowhere” and policies that protect special interests and keep the different modes of transportation walled off from each other.

Infrastructure is more than roads and bridges. It ordains our behavior for generations.
The Michigan Tech Transportation Institute (MTTI) is helping blaze a trail to the flexible transportation infrastructure needed. Faculty from across campus are working together in the institute to develop innovative, multidisciplinary answers to the challenges of transportation today and tomorrow.

MTTI is looking at much more than roads. The institute, headed by Professor Larry Sutter, is expanding its involvement in all modes of transportation. Take railroads, for example. Tech's involvement in all modes of transportation, rail, air, and mass transit into a single, seamless system. (The Michigan Tech Transportation Institute is investigating a similar system for transporting freight in the Great Lakes region. See the related story below.)

Parcel shipping companies like Federal Express and UPS can show us the way. “They don’t care how a parcel is moved,” Sutter points out, “only that it travels as cheaply and quickly as possible.”

In the future, infrastructure will be expected to serve needs we cannot even conceive of today,” he says. “We need to develop a far-reaching vision of flexible transportation infrastructure that future generations of Americans will find useful and enabling rather than constraining and constraining.”

Michigan Tech Transportation Institute: Looking to the future

The Michigan Tech Transportation Institute is helping blaze a trail to the flexible transportation infrastructure Bruce Seely says this nation needs. Faculty from across campus work together in the institute to develop innovative, multidisciplinary answers to the challenges of transportation today and tomorrow.

MTTI is looking at much more than roads. The institute, headed by Professor Larry Sutter, is expanding its involvement in all modes of transportation. Take railroads, for example. Tech’s Rail Transportation Program is gaining national and international attention. Recently, IHM invited Michigan Tech to be a university partner in its new Global Rail Innovation Center in Beijing, China. MTTI researchers are also conducting studies to identify the most efficient ways to move freight through the Great Lakes region, using marine, rail, and road transportation.

“In the industry there is an increasing emphasis on sustainability,” said Sutter, and MTTTI is responding by providing solutions that address the social, environmental, and economic impacts of the decisions we make in constructing, maintaining, and utilizing transportation infrastructure.” One current research project will provide a framework for assessing the environmental footprint of pavement construction options. Another provides software tools to help transportation agencies monitor the condition of infrastructure assets such as bridges, pavements, culverts, and signage. A better understanding of the environmental footprint of various construction options can lead to more sustainable practices, and asset management tools will allow society to achieve the highest return on the enormous public and private investments in our transportation systems.

For more information, visit MTTTI’s website, www.mtti.mtu.edu.

The gas tax isn’t working any more, says Seely. “The Highway Trust Fund could run out of money as early as 2013.”

He is also concerned about finding the resources to build new infrastructure and maintain what we already have. Initially, Congress wisely chose to fund the interstate system via gas taxes sequestered in the Highway Trust Fund. But gas tax revenue hasn’t kept up with costs, and as we move to more and more fuel-efficient vehicles, taxes become an ever-shrinking resource.

“The funding mechanism based on the gas tax isn’t working any more,” says Seely. “The Highway Trust Fund could run out of money as early as 2013.”

What does Seely suggest?

The enormous cost needs to be spread across the whole of society, he proposes. Private toll roads and other commercial approaches or public-private partnerships will not do the entire job. “If the only solution is strictly market-driven, the broader needs of society—especially the development and maintenance of a complete transportation system—cannot be served,” he says.

What is needed is a transportation policy that looks beyond today into the future, Seely continues. And what that future requires is intermodal transportation—linking roads, rail, air, and mass transit into a single, seamless system. (The Michigan Tech Transportation Institute is investigating a similar system for transporting freight in the Great Lakes region. See the related story below.)

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Summers of discovery

“Most people asked what did you do over the summer?”

Every summer, Youth Programs hosts more than fifty weeklong explorations in areas like engineering, photography, video game programming, wilderness ecology, volcanoes, field trips, and more. “We learned all about landslides and volcanoes,” said Stephanie Squandra, a WIE participant. “Eventually we were given a problem to solve: how can you prevent a house built on the side of a river from being washed away? My team built a model, designed a dam around the house, lined it with rock—and it survived! So awesome!”

“Favorite part of the week was . . . well, everything,” said participant Andrew Meyer. “I got to make aspirin and see for myself how chemicals interact with one another.”

As well, Youth Programs offers a variety of scholarship programs, including Women in Engineering (WIE) and the Engineering Scholars Program. Both are fully funded, competitive programs for academically talented high school students. Their focus is engineering—ten different fields are explored—and they feature hands-on projects, group activities, field trips, and more.

“Girls can lead to more sustainable practices, and asset management tools will allow society to achieve the highest return on the enormous public and private investments in our transportation systems.”
AN EXCELLENT ADVENTURE

By Marcia Goodrich

With its shadowy entrance leading into a hillside deep in the woods, the Adventure Mine brings back memories of Snow White. But a tour of this old underground mine is much more than a fairy-tale escapade. It also offers lessons in history, mining, geology, and even biology.

Starting in 1850 and for seventy years thereafter, miners hauled millions of pounds of copper out of the Adventure Bluff. The region’s copper business has since gone bust, but the Adventure Mining Company is enjoying a second life as a Keweenaw Heritage Site. Part of the Keweenaw National Historical Park, it now attracts history and mining buffs, casual visitors, and tourists in search of something different.

It lured its current owners, Victoria and Matthew Portfleet, to tiny Greenland, Michigan, about five years ago. Victoria had earned her bachelor’s in surveying from Michigan Tech in 1999, and Matthew completed his Tech degree in mining engineering in 1998.

“I’d always had a fascination for mining when I was a kid, and when I was a student, my friends and I did a lot of hiking and exploring the old mine sites,” says Matthew. “Vicky and I were up here, debating what we wanted to do in life, and then the Adventure Mine came on the market.

“We talked it over and decided it would be a fun thing to try—you don’t see too many mines for sale.”

The mine gives Matthew a chance to put his mining degree to work in a family business. And despite the seven-day-a-week work schedule in the summer, “it’s an adventure in its own right,” says Victoria.

The Adventure Mine offers three tours that cater to visitors’ varying levels of fitness and grit: For an introduction to the miners’ world, try the hour-long Trammer’s Tour. The ninety-minute Prospector’s Tour takes you farther and deeper into the mountain. And if you really want an adventure, try wrapping yourself in harness and rappelling eighty feet down a ventilation shaft during the three-hour Miner’s Underground Tour.

The Portfleets also held the inaugural Miner’s Revenge Mountain Bike Race last summer. It drew more than a hundred cyclists who pedaled up a ski hill, threaded their way through a narrow tunnel, and skidded down a steep bluff. “It was very technical,” says Matthew, by way of understatement. “Everyone gave it rave reviews.”

Tour guides are well-versed in history and geology, both of the Adventure Mine and of the copper-mining region. Many are Tech students, who appreciate the chance to work and live near Houghton during the summer. This day, computer science undergraduate Brandon Benedict leads a group on the Prospector’s Tour. The tunnel descends gradually into the hill. Step by step it gets cooler and darker. The basalt walls glisten with water droplets, a mist hangs in the air, and on a hot summer afternoon visitors are grateful for their jackets. Turn a corner, and it’s black as pitch. Fortunately, headlamps are provided.

Benedict leads the way, telling stories about the mine and the miners and offering insights into the unique geology of the region. A bat flutters about, unnerved by the visitors’ presence. “They are nothing to be afraid of, he assures the group. “Hamsters with wings,” he calls them.

“Bats like to hang out in the stopes,” says Benedict as the tour descends farther into the mountain. “It’s warmer there.” Stopes are the large caverns in the mine, dug out years ago for their copper. Keweenaw copper is nearly pure, he explains, and miners followed veins of the red metal wherever they led. “The main rule was, you go where the copper goes—all for a buck a day.” He points out a big chunk of tarnished green metal still embedded in the wall; any copper that was too difficult or dangerous to extract was left behind.

Mining copper was a tough way to make a living. Benedict demonstrates how miners pounded holes for dynamite: one man held a three-foot-long bar called a drill steel against the wall while two others hit the end with sledge hammers by the light of a single candle. If a miner was working alone and his candle went out, sometimes he had to wait until the next shift arrived to find his way out.

The visitors leave with a deep appreciation for those who moved ton after ton of rock for a dollar a day. You wouldn’t want to work there, they agree, but the mine is a great place to visit.

Visit www.adventuremine.com for more information. The Portfleets offer discounts on tours of 10 percent to Michigan Tech alumni, 20 percent to Michigan Tech students.
Finding founding fathers for a quasquicentennial

By Erik Nordberg

The year 2010 marks Michigan Technological University’s 125th anniversary. The dictionary app for my handy iPhone indicates the correct word for such an auspicious event is “quasquicentennial,” where quasi means “one and a quarter.” I’m not sure that Michigan Tech will undertake elaborate quasquicentennial events—or even use the word quasquicentennial. In fact, I think I’ve just decided never to use it again myself. Yet it is a good time to consider the history of this august institution. I will start with someone who is probably unknown to you, John Parke Channing. But before I begin, I’d like to note that there are many stories that shed light on Michigan Tech’s history, including your own, and you are invited to share your memories at www.mtu.edu/125.

People often ask about the founding fathers of Michigan Tech, expecting us to recount early college presidents and the corporate mining men who served on the Board of Control. But I prefer to start with Channing, after whom no campus building is named but a man who left an indelible mark on the Michigan Tech. He came to the Copper Country initially as a draftsman for a Marquette Mining Journal owned on the eastern outskirts of Houghton for a new campus. Perhaps as important, Hubbell donated five city lots that he owned on the eastern outskirts of Houghton for a new campus.

While gathering statistics about Keweenaw copper mines for the 1884 Michigan Mineral Statistics report, Channing visited most of the established companies in the region. The question of technical education was frequently discussed. Although a relatively new academic discipline, college-based study in geology and mining engineering was becoming increasingly respected and desirable.

The state had actually passed legislation in 1864 to establish a mining school in Houghton County, the first such formal program in the country. But a lack of funding and the start of the American Civil War delayed implementation. Following the war, a school of mines was established at the University of Michigan and began granting degrees in 1867. Yet only forty-one mining engineers completed the program over ten years, and funding was cut in 1877.

For Channing, the Copper Country of the mid-1880s was ripe for action. Placing a mining school in close proximity to active mining seemed logical for traditional students who might relocate to the region. But he also saw “a crying demand for men working in UP mines to find some means of studying the fundamental branches of engineering.” He envisioned schools in both Houghton and Ishpeming “in which the young man who works all day or all night underground and may have a few hours’ daily instruction in mathematics, machinery, drawing, primary chemistry and other branches.”

Channing proposed that such a system “would be much more satisfactory than establishing a single large mining school in Ann Arbor . . . What we want are small schools where the practical [student] can be educated to a better knowledge and appreciation of his work where he can be so instructed that he can impart to others the knowledge he has practically obtained.”

A copy of the article made its way to Jay A. Hubbell, Houghton resident, former US congressman, and then-state senator representing the Upper Peninsula. Hubbell was a wealthy and respected civic leader who also wanted to see a mining school started in Houghton. Hubbell requested Channing’s assistance in marshaling the necessary forces, and within months they were pressing the state legislature. On May 1, 1885, the state passed a new act establishing the Michigan Mining School.

The politician Hubbell is rightly called the father of Michigan Tech. His legislative prowess secured the vital initial appropriation of $15,000 for the new school, which convened its first classes in rented space above the Houghton fire hall in 1886. Perhaps as important, Hubbell donated five city lots that he owned to the creation of the school. Right, the Class of 1888.

Channing, left, joined Hubbell in lobbying for the Michigan’s first campus building, above, initially known as Science Hall, later named in honor of Jay Hubbell, pictured above. John Channing, left, joined Hubbell in lobbying for the creation of the school. Right, the Class of 1888.

You are part of Michigan Tech’s history. Help keep it alive with your stories.

During Michigan Tech’s quasquicentennial, it’s easy to think that history is very important stuff that happened 125 years ago. That’s only partly true. History is drawn from everyone’s experiences. If you have a story to tell about Michigan Tech, now is the time to share it. The University has set up a website, www.mtu.edu/125, where you can post your recollections about anything from broomball to your favorite professors. While you are there, you can also read other people’s memories about Michigan Tech.

Do it for fun, for old friends, and for posterity. Because in another 125 years, all those great stories really will be history. www.mtu.edu/125
Ojibway tribal member Lori Muhlig models the jingle dress she wears at powwows. MICUP helped her make the transition to college, and now she codirects the program at Michigan Tech.

Bridging the gap
Helping community college students feel at home at Michigan Tech

By Jennifer Donovan

Lori Muhlig was babysitting her foster mother’s children while her mom attended class at Northern Michigan University when a radical idea struck the teenager. “I wonder if someday I could go to college,” she thought.

As appealing as Muhlig found that idea, the Native American from Zeba—part of the Keweenaw Bay Indian Community—also found it terrifying. She had grown up with a deep belief that higher education was an overwhelming, intimidating experience. “My family passed that fear down from generation to generation,” she recalls.

After high school, Muhlig went to work at a local gas station, and before long she was its manager. She was also getting bored, and she wasn’t looking forward to a future filled with more of the same, complete with low pay and no benefits.

So she started small and close to home, enrolling at Gogebic Community College. While there, she was invited to spend part of a summer trying on Michigan Tech, as a participant in the Michigan Colleges and Universities Partnerships (MICUP, or “my cup”) program.

At Tech she met Christa Walck, a professor in the School of Business and Economics. MICUP students do internships with Michigan Tech faculty, and Walck chose Muhlig to conduct a case study on the Keweenaw Bay Indian Community. “I thought it would be a good opportunity for her to do research on her own community and have it valued, not just by writing it up for a class, but by presenting it at a conference,” Walck recalls. “I think it was a real eye-opener for Lori.”

MICUP students also take a class during their summer experience. Knowing she needed computer skills, Muhlig chose a computer class. “I knew nothing about computers, didn’t even know how to turn one on,” she recalls.

Muhlig wanted to go to college, but the teacher might as well have been speaking Greek. Calling home in hysterics, Muhlig wept, “I’ll never be able to do this.” When she finally admitted to her teacher that she’d never been on a computer before, the stunned instructor said, “Why didn’t you tell me?” “You didn’t ask,” Muhlig replied.

“I was in that computer lab until four o’clock in the morning night after night, but I did pass, and with Dr. Walck’s encouragement, I began to believe that I could do university work.”

The bond she established with Walck enabled Muhlig to take the leap and enroll at Tech. She took a class from Walck and went on to major in business. Muhlig is now coordinator of Native American outreach at Michigan Tech and codirector of MICUP, paying it forward to countless others what the program did for her.

Take Andy Puhles, for example. From MICUP the Cuban immigrant not only gained the confidence to attend Michigan Tech, major in electrical engineering, and go on to score an engineering job with Caterpillar’s Locomotive Systems, he met his future wife. Idaliza Gómez, a native of the Dominican Republic, and Puhles started in MICUP as “friends” and continued dating after their return to Grand Rapids Community College to complete their associate degrees. Then they headed back to Houghton. Gómez graduated in biological sciences with a minor in biochemistry and is working on her teacher certification. She and Puhles married last January.

It was hard to convince her parents to let her go to school so far away, Gómez says. The traditionally close family ties among Hispanics often are cited as a factor in their low college graduation rates. A study recently released by the Pew Hispanic Center found that fewer than half of 18-to-25-year-old Hispanics plan to earn a bachelor’s degree, compared to more
Michigan Technological University www.mtu.edu

### Michigan Tech’s MICUP program works with students from Delta College, Grand Rapids Community College, Keweenaw Bay Ojibwa Community College, and Wayne County Community College District. It is sponsored by the King-Chávez-Parks District. It is sponsored by the King-Chávez-Parks District.

Moving to Houghton was a hard choice for Publes. He explained, “Then I got to Michigan Tech and fell in love with the school, the town, and the people. I loved the lifestyle and the classes.”

Now that he’s working in the engineering field, Publes calls coming to Tech “a great decision. I received the right tools to be an asset on the Caterpillar team, which has some of the best engineers from all over the world.”

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### Arthur Gwion, right, explains his research to Roger Maltas at a MICUP poster session. The program introduces students to the rigors of college and gives them tools to succeed, said MICUP codirector Madeline Mercado Voelker, above.

### Winter 09–10

Michigan Tech President Glenn D. Mroz has considered to be in remission just three months after diagnosis, but the ordeal was far from over. The treatment for leukemia would last three years, including daily doses of medication, weekly blood tests, twice monthly drives to Marquette for chemotherapy, and too many spinal taps to count. Not to mention the worry that the cancer would come back. “We sat on pins and needles every time the doctor came in with the results, wondering what he was going to tell us, hoping the numbers weren’t worse than the last time,” said Cyndi.

David missed fourth grade and was home schooled by his grandmother, a retired teacher. When he returned to fifth grade, the school changed the rule to allow all students to wear hats so David could hide a balding head. He still had to be careful. The illness (or treatment, rather) kept white blood cell and platelet counts low, kept him in bed sick a lot of days, and kept the future all-conference safety away from physical contact in sports.

### Michigan Tech has been happy to have David both as a student and as a student. He led the team in tackles for the second straight season. His ninety-seven tackles a year ago helped him earn All-Great Lakes Intercollegiate Athletic Conference Second Team honors. He also accumulated a 3.52 grade point average in civil engineering on his way to graduating in December 2009.

### David Carmody

Happy to be lacing up his cleats

### By Wes Frahm

I t’s three days after Michigan Tech’s 48-16 setback to Northern Michigan in the rivalry’s annual gridiron battle for the Miner’s Cup. There aren’t too many smiles around the Huskies locker room. Well, maybe one—the team’s starting free safety and leading tackler, David Carmody.

He’s not smiling because of the results last weekend or the 0-3 start by the football team, which had much higher expectations. He’s just happy to be lacing up his cleats and snapping his chinstrap for another chance to play football. Having been diagnosed with cancer at age ten, the Newberry native has a perspective on life different from most college seniors. “He’s a really good leader on our football team,” says Tom Kearby, Michigan Tech’s head football coach. “He doesn’t say a whole lot, but the way he handles himself and his work ethic speak volumes.”

There was no trick-or-treating on October 31 in 1996 when doctors in Marquette dropped the big “C” on the Carmody family. “My heart just stopped when the doctor said leukemia,” recalled David’s mother, Cyndi, of that Halloween thirteen years ago. “I couldn’t say anything, and I was thinking the worst because we didn’t know exactly how bad it was.”

Fortunately, the cancer (acute lymphoblastic leukemia, in which white blood cells are overproduced in bone marrow) was caught relatively early. David was
With paddle and pluck, an adventurous twosome—one a student, one an alumnus—circumnavigated Lake Superior in kayaks last summer. Hannah Abbotts, a senior in forestry and environmental science, and her husband, Matt Abbotts '07, of Calumet, were right at home braving the restive waters of the world’s largest lake. Their passage measured one thousand miles and took nearly three months. The endeavor was hard to do but good to have done, Matt said. “You saw enough eagles to make them commonplace, especially on the US side. The view from the lake ranged from the hills of Canada, to the flatlands of the eastern UP, to Munising’s sandstone cliffs. “On the north side of the lake, we hit the start of the boreal forest,” Hannah recalled. “You could smell the balsam fir. It was a rush.”
The RTC PhD turns 20
Thinking outside the box since 1989

By Dennis Walikainen

From its beginnings, the rhetoric and technical communication (RTC) PhD program has prided itself on breaking the mold.

Indeed, it seemed an odd fit twenty years ago, a high-end degree in a rarefied field at a university best known for engineering. But since the Department of Humanities established the program in 1989, the RTC PhD has propelled dozens of graduates to rewarding careers. It was “the consistent caliber of people” in the department that drove the program’s success, says Johnatan Johnson-Eilola ’93, a professor at Clarkson University in Potsdam, New York, and the program’s first PhD graduate.

Former humanities department chair Cindy Selfe, now a professor at Ohio State University, was there at the beginning. “Colleagues from other institutions always assumed that Michigan Tech was much bigger than it was, that we had extraordinary funding, or that we had cutting-edge technology; what we really had was outstanding faculty and graduate students,” she says. “The profession recognized the efforts of these folks and noted what a marvelous community had been assembled at Tech.”

“There’s nothing to compare it to,” Johnson-Eilola says, remembering his years as an RTC graduate student. “It was like your family, your home, and not just a place to learn. It was a tribal thing. Frankly, it has something to do with the isolation in Houghton and the humanities department existing in a largely engineering school. But, the administration and others discovered that we were successful in what we were doing.”

The RTC faculty members were taking the lead in studies that were just beginning to take root, says Cheryl Ball ’04, a professor at Ohio State University, was there at the beginning. “When we were developing the proposal for the program, there was some resistance on the part of the faculty who did not have strong research profiles and felt that it would exclude PhD graduates were needed, not only in academia, but also in civic and corporate settings. As he predicted, students and faculty would eventually weigh in on rhetorical topics as far-flung as computers in composition, portrayals of diverse populations, and ethics embedded in technical manuals.

“People benefited from our program’s engagement with the technical communication sector of human endeavors—what else would a graduate studies program want to boast?” says Meese. He also knew a good RTC program would be good for the University, attracting top graduate students from other schools and providing the humanities faculty two welcome challenges: to conduct research and mentor excellent students. Many of those students have now become faculty in their own right.

Good references

Monica Torres, chair of the English department of New Mexico State, hired Jenny Sheppard ’03 and Kathryn Valentine ’03. “They’ve been great,” Torres says. “They are both directors, Jenny of the Design Center and Kathryn of our Writing Center, and they’ve both brought different knowledge to our department, in addition to their teaching.”

“It’ll be interesting to see them discover what else is possible here,” Torres says. At Clarkson, Bill Karis, associate professor of communication and media, says, “It’s been nearly a decade now since Johnatan [Johnson-Eilola] arrived here, and he’s had significant and positive impacts on our department’s teaching and scholarly activities. But for me, his collegial demeanor and temperament has been equally valuable: always generous, serious, and pragmatic. Seems to me we made a good hire.”

Selfe is not surprised by the RTC alumni’s success. “The students with whom I got to work were among the very best I have ever met,” she says. “No wonder we’re all so proud of this anniversary.”

Rhetoric and Technical Communication by the numbers

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Lynn Watson stabs her spade up to the hilt into the willing dirt. “It’s so excellent,” she says. “This is like chocolate cake.”

Watson is Michigan Tech’s gardener, and she is digging a new home for a yoga in a long, serpentine flowerbed in the campus mall. As anyone who has recently paid a warm-wet-weather visit to campus knows, gardens have been popping up all over. Diasies, daylilies, rudbeckia (black-eyed Susans and their kin), purple coneflowers, rhubarb, violets, roses, monarda, hostas, blueberries, Russian sage, coral bells, dianthus, geraniums, rose campion, lupine, hollyhocks, heli-bells, dianthus, iris, sedums, Russian sage, coral eyesed Susans and their kin), purple cone-mums, and put it up on the Michigan Superior and the campus’s much beloved beach. Every year, we have more rocks deposing against the hard real-

Watson has built thirty-nine gardens since coming to Tech and has sixteen more planned for 2010. Some are tiny putting enough bark and put it on the Michigan Tech Trails. That’s a good place for it.”

How to build your own perennial garden spot

A good garden requires a lot of work up front, but building fertile, weed-free soil gives much better results in the long run. You won’t have to water or weed nearly as much, and plants are more likely to survive and thrive. Clear your spot. Smother, dig out, or otherwise kill the vegetation and dig out the roots. Or, just build a raised bed on top, about a foot deep. You have to be careful. You can bruise the sides with rocks, limbs, fencing ... whatever suits your fancy.

Put on a 50-50 mix of manure and topsoil about a foot thick—again, two feet thick if your soil is poor. Manure from a dairy farm is better than bagged manure from a store because it adds texture to the soil. Watson uses sections of the Daily Mining Gazette folded in half as you would feed them in a vending machine. Wet the newspapers thoroughly as you overlap them on the ground, but keep the edges together, hold them in place with town picks if the site is windy. Spread a layer of feed hay (not straw) about four inches thick across the entire bed. Build up a collar of hay around each plant. This helps keep the soil from drying out, especially in the wind. Water again.

Over time, the newspapers and hay will decompose. By then, the plants will be big enough to shade out most weeds. Watson likes to put in a few inches of mulch in a circle around each plant. The topsoil will improve the soil. You can continue to control weeds over the years by smothering them with newspapers.
Writing is often the bane of technical folk, and Raphael Mudge ’03 was no exception. “I worked at the Air Force Research Lab in Rome, New York, and they had very strict guidelines,” he says. “So I wanted to do something to improve my writing.”

He thought it would be nice to help other people write better, too. So he put his software development skills to work on a grammar- and spell-checker designed specifically for web-based content. The result is After the Deadline, a plugin that checks for spelling, misused words, grammar, and style in WordPress, one of the most popular packages for publishing blogs.

Style? Mudge is first to admit that After the Deadline shouldn’t be used to edit The Complete Works of Charles Dickens. It’s based on “plain language,” a style the federal government uses to make writing useful and easy to understand.

“It actually works extremely well,” he says, though it is not universally admired, particularly by lovers of the passive voice and the word “utilize.”

“I have had people say, ‘Your software shouldn’t tell me not to do this because I want to sound smart,’” says Mudge. “I tell them ‘No, you do not sound smart; you are making it hard for the reader to understand.’

Most users who have tried After the Deadline think it’s great, including Matt Mullenweg, the founder of the web-software company Automattic, which operates WordPress.com. Automattic bought After the Deadline in September.

“When I first tried After the Deadline I was blown away; it was so much better than other checkers I’d used, and it was by one guy building this thing that solves a problem other folks have teams of PhDs trying to solve,” Mullenweg said.

In addition to buying Mudge’s business, he also hired Mudge, who jokes, “I haven’t had a real job since I left the military, so I have teams of PhDs trying to solve,” Mullenweg said.

“I have been having the time of my life,” he says. “It’s a fun problem.” It’s also satisfying to know that he’s helping people write cleaner, more effective copy.

As for his own prose, Mudge is modest. “People expect my writing to be perfect, but I invented the tool because I needed it,” he says.

To find out more about After the Deadline, go to www.afterthedeadline.com. You can try it out, download it for free, and find out why it’s called ‘After the Deadline.’

After the Deadline: Computer science alum builds a better spell-cheker

Small loans, big results

A couple hundred bucks may not go that far in the US anymore. But in the developing world, it can set up a dressmaker, provide seed money for farmers, or supply a general store.

Tom Arbuckle ’75 decided to harness the power of small money last fall by forming a Michigan Tech Alumni Association Kiva Lending Team.

Kiva, according to its website, is “the world’s first person-to-person micro-lending website, empowering individuals to lend to unique entrepreneurs around the globe.”

“I was impressed with the idea of loans because you can see the same money being used again and again,” Arbuckle said. “The entrepreneurs are using the money to help their families while providing goods and services to their communities.”

Lenders can browse the profiles of entrepreneurs on the Kiva site and decide whom they would like to support. “The loans are given to real projects with descriptions, pictures, stories, etc.,” said Arbuckle. “I like the idea of knowing how much money is given to whom and for what purpose.”

Dr. Mark Mitchell ’77, president of the Alumni Association and a Kiva team member, encouraged other alumni to join the team. “I hope this kiva.org group will give our alumni the means to further fund good works across the world,” he said.

The profiles on the Kiva site hit home for Steph (Wisniewski) Krieger, another member of the Alumni Association’s Kiva lending team. “I’m an entrepreneur myself, and I came from small beginnings,” she said. “I’m now a consultant, and I regularly hear from people who have great ideas but can’t find the money to implement them.”

Kiva reminded Krieger of a 2008 Jim Carrey movie, in which the banker protagonist approves small loans to local entrepreneurs.

“I thought this is a real life Yo Man story,” she said, adding, “I believe we should broaden our minds to what community means. The real power behind Kiva is reach. The Michigan Tech alumni online community reach is currently at 26,000 and growing.

As more alumni join in, one by one, and Kiva matures, the success stories unfold. This is what it is all about for me, being a part of something great for someone else.”

To learn more, or to contribute, go to the Michigan Tech Alumni Association Kiva website, www.kiva.org/team/michigan_tech_alumni_association.

Mentoring is a brain to pick, an ear to listen, and a push in the right direction.

―John C. Crosby

Share your professional experience... help students prepare for their next big step

It’s an ever-changing world out there but one thing is constant: Michigan Tech alumni and students share a rigorous academic experience and are well prepared to meet workplace challenges.

Students benefit greatly from the many alumni who financially support scholarships, facilities, research, and many other campus activities, but the value they receive from those who share their time and experience is incalculable.

With the launch of the Alumni Association’s new mentoring program, alumni can share their professional experience as well as network with students and recent graduates. It provides a great opportunity to show your passion for your industry and profession and possibly get them interested in pursuing a career in that area.

Ken Guenther, who attended Tech on an US Army program in 1945, believes so strongly in the value of sharing knowledge and experience with students that he has committed to funding this program. “This interaction can be so powerful,” he says. “Alumni receive the satisfaction of giving of themselves in the form of insight, contacts, networking, and help. The students benefit by converting the information into career progress. This is a win-win deal.”

“We have many examples of how alumni open doors for our students within their corporations,” says Jim Turnquist ’79, director of career services. “With this program, alumni can also provide guidance to students who are looking for information about professions and industries to help them make decisions on their future careers.”

The new mentoring section of HuskyLink helps build these connections. It’s easy; just go to the website and fill in your mentor profile. Students can then contact you for career advice. There are even suggestions for maintaining a good mentor-mentee relationship. To learn more about how you can provide encouragement and support to students, visit www.mtu.edu/alumni/mentoring/mentoring.

Michigan Technological University
www.mtu.edu
From the Archives

Michigan Tech’s newest/oldest building

By Erik Nordberg

Michigan Tech completed work last fall converting an office building on the downtown Houghton waterfront into its new Lakeshore Center. Most locals know the structure as the UPPCO Building, due to its most recent tenant, the Upper Peninsula Power Company. The University and the Michigan Tech Enterprise Corporation (MTEC) SmartZone received a $3.02 million federal Economic Development grant for the project. The Lakeshore Center will see varied use: the ground floor will house MTEC, while the second and third floors will see Michigan Tech’s research and human resources departments and a number of private and governmental tenants.

Yet during the renovations, passersby were alerted to some clues about the building’s origins. As exterior window panels were removed, one could clearly see the word “fruit” stenciled on the underlying surface, revealing the building’s former use as a waterfront food storage warehouse.

Early records indicate that portions of the building may have been constructed as early as the late 1890s as a warehouse for Graham Pope, a local merchant who operated several stores in the area. The historical record is somewhat murky on the details, however, and it is possible that Pope’s building was an earlier wooden construction which was completely replaced. Other documents verify a transfer of ownership to the Peninsula Grocery Company in 1902. Fire insurance maps for 1908 show a smaller building covering only a single waterfront city lot; by 1917 it had enlarged to cover the four city lots it currently occupies.

Regardless of the exact date of construction, these bits of data confirm that the building will not only be Tech’s newest building, but also one of its oldest. Many earlier structures have made way for the campus’s “high rise” buildings erected in the 1970s. The two oldest remaining campus buildings are the ROTC Building, opened in 1906 as the Club House and Gymnasium, and the Academic Offices building, completed in 1908 as the Administration and Library building.

Meanwhile, back to our waterfront building. In 1928, the warehouse changed owners and was used for many decades by the Cohodas-Paoli Company, a wholesale marketer of fruits and vegetables. The building suffered a fire in 1935, but following renovations it continued to serve as the Copper Country warehouse for Cohodas-Paoli’s food-distribution network serving the Lake Superior region.

In addition to managing the warehouse, the company also operated an active dock frontage adjacent to the building, assisting with the transloading of deliveries between lake boats, railroad cars, and other modes of local delivery. Many seasoned alumni may associate the Cohodas-Paoli dock with the comings and goings of passenger ships such as the SS South American.

In the late 1980s, the city of Houghton acquired the building from Cohodas-Paoli in hopes of finding a civic use for this significant waterfront property. The Upper Peninsula Power Company agreed to purchase and renovate the building, and in 1991 the building was opened for use as UPPCO’s office headquarters, with additional commercial tenants renting space in the renovated warehouse.

Michigan Tech, who had rented space in the building in the 1990s, finalized its purchase of the facility from UPPCO in February 2008.

Michigan Tech’s renovation of the building will transform it appropriately for the new “green” century. The building was certified through the Leadership in Energy and Environmental Design (LEED) program by the US Green Building Council. The project received marks for its new white roof, water-saving fixtures, energy-efficient windows, and improvements to heat pumps. Materials were scavenged during the initial demolition and recycled for re-use in the project rather than shipping to a landfill. It’s great to see Michigan Tech is breathing new life into this building as its Lakeshore Center, and is equally gratifying to know that under the new exterior will lurk one of the city’s most historic structures.

The new Lakeshore Center was once the Cohodas-Paoli warehouse, part of Houghton’s commercial waterfront (see photo at left). In 1991, the city of Houghton sold the property to the Upper Peninsula Power Company for its headquarters. Michigan Tech leased space in the building and in 2008 bought and renovated the structure to house some administrative departments and the Michigan Tech SmartZone office.
Regional alumni event schedule

**January 28**
Minneapolis—School of Business and Economics Reception

**January 31**
Grand Rapids—West Michigan Chapter brunch at Marie Callender’s

**February 3–7**
Houghton—Winter Carnival

**February 18**
Las Vegas—Pub Night

**February 19**
Salt Lake City—Huskies Hockey game watch

**February 20**
Denver—Pregame event, Huskies Hockey vs. Colorado

**February 27**
Traverse City—North Stars hockey

**March 16**
Houghton—Keweenaw Chapter St. Urho’s Day Social

**April 10**
Boston—Pub Night

**May 1**
Houghton—Spring Commencement

**July 10**
Saugatuck—Golf outing

**August 5–7**
Houghton—Alumni Reunion 2010

**October 1–2**
Houghton—Homecoming, Alumni Broomball Tournament

*For up-to-date listings of regional alumni events, visit [http://mtu.edu/alumni](http://mtu.edu/alumni).*

Tanya Wareham Klain memorialized

On October 10, 2009, family, friends, and Michigan Tech leadership gathered on campus to celebrate the life and service of alumna Tanya Wareham Klain, who died on December 7, 2008.

Tanya was the founder of Michigan Tech’s Alumni Club and was a lifetime member of the Alumni Association.

Tanya graduated with a BS in Mechanical Engineering in 1990 and was a member of Gamma Delta, Undergraduate Student Government, residence hall council, the Alpine Ski Club, and the Michigan Tech Student Foundation.

After graduation, Tanya worked for General Motors and advanced through several leadership positions. She was a member of GM’s university relations and recruiting team and was instrumental in ensuring GM’s presence at Tech’s YES Expo.

She served on the board of directors of the Alumni Association and was active in Detroit area alumni events. In 2004, Tanya was inducted into the University’s Presidential Council of Alumnae.

Tanya was an ardent supporter of the ME-EM department, serving on the industry advisory board and on the Phase II ME-EM Building for the Future campaign.

Tanya’s leadership and stewardship were based on fond memories and a commitment to serve. Recognition certificates and memory books were presented to Tanya’s family, and a copy of the certificate will be hung in the department.

A video of the memorial is available at [http://webcasts.mtu.edu/mediastream/](http://webcasts.mtu.edu/mediastream/)

Otto honored by Society of American Foresters

Otto A. Otto ’74, a consulting forest engineer and thirty-plus-year employee of the Oregon Department of Forestry, will receive one of eight Presidential Field Forester Awards from the Society of American Foresters.

Otto was recognized for the excellence and professionalism he has displayed throughout his career. His activities include overseeing Oregon Forest Practices Act compliance, administering cost-share programs, writing forest management plans, and providing technical assistance to small-woodland owners. He is active with the local Oregon Small Woodland Association.

Otto has been involved with Firewise communities and assists in reducing the risk of wildfire. He implements National Fire Plan grants and projects and has successfully obtained grants totaling several million dollars to help reduce fuels in and around communities and provide education and outreach in wildfire risk reduction and fire prevention.

Otto served as chair of the SAF Central Oregon Chapter, chapter delegate-at-large, and membership chair—his current position.

Otto’s career is also notable for his work in Wildfire Management Planning and his roles as a founding member and co-owner of the Portland Consulting Firm. 

Otto’s work has been recognized with several awards, including the Society of American Foresters’ “Outstanding Young Forester” award and the Oregon State University’s “Outstanding Alumnus” award.

Otto’s contributions to the field of forestry have been acknowledged through his membership in several organizations, including the American Society of Forest Engineers and the Oregon Forest Society.

Otto continues to share his passion for forestry through writing and public speaking, and he is a frequent contributor to various forestry journals and publications.

Norton published in Audubon

By October 1, 2006, published a featured article in the November Audubon. “Sacred Sea” covers environmental issues and threats to the oldest (25 million years), deepest (5,400 feet), and largest lake in the world by volume (holding 20 percent of the Earth’s liquid fresh water). The article also details some of Norton’s twenty-three years of travel to Lake Baikal, in Siberia, in efforts to preserve the lake and environment.

B oyd Norton ’60 published a featured article in the November Audubon. “Sacred Sea” covers environmental issues and threats to the oldest (25 million years), deepest (5,400 feet), and largest lake in the world by volume (holding 20 percent of the Earth’s liquid fresh water). The article also details some of Norton’s twenty-three years of travel to Lake Baikal, in Siberia, in efforts to preserve the lake and environment.

Norton is a founder and fellow of the International League of Conservation Photographers and is a director of Baikal Watch, dedicated to preserving Lake Baikal and other wilderness areas of Siberia. He is a founder and serves on the Board of Directors for the North American Nature Photography Association.

Norton has written sixteen books and has three in the works. View his photos at [www.wildernessphotography.com](http://www.wildernessphotography.com).
in the Winter Carnival tug-of-war. We won’t say whether or not they won.

Robert Harrington ’73 received a Toastmasters Competent Communicator Award and is working on the Competent Leadership Award. He was part of the Michigan Tech Theatre (Actors) group in 1965–68 and again in 1973. “Are there any thespians from that era still alive and kicking?”

Richard Newell ’70 Since retiring, he takes daily bike rides and wears his Tech jerseys “to let folks know who I really am!”

John Ryder ’76 retired from his federal government career in 2007 after thirty-one years. John volunteers with the Boys and Girls Club and the Kiwanis Club of Sparta; hobbies are fishing, hunting, and duplicate bridge. When his wife retires, they intend to travel, renew old acquaintances, and visit family.

Richard Wolf ’96 attended Tech from ’72 to ’76. He left school to take a job and returned to finish his degree in 1996.

James Fetch ’77 Laid off from his position as a controls engineer for an auto industry supplier, he has started a new company doing machine repair. See his website: jaagrepair.com (Just An Average Guy).

Justine Pratt ’90 Her company, Creative Algorithms, just released its first iPhone app, Date Wheel date calculator.

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James Fetch ’77 Laid off from his position as a controls engineer for an auto industry supplier, he has started a new company doing machine repair. See his website: jaagrepair.com (Just An Average Guy).

Matthew Sahrweide ’01 and his wife announce the birth of their third child in September 2009. Theodore (Teddy) Sahrweide watched his first Packers game at age two days old.

Jody Kozlisky ’01 and Daniel Schaub, both of Howell, announce their engagement. The couple plans to wed in fall 2010.

Keith and Nicole (Altomaro) Core ’03 announce the birth of Chloé Kaitlyn on 5/7/09 in Sugarland, Texas. George and Jamie Troth ’03 announce the birth of Alyza on 2/5/09.

Derrick A. Siebert ’04 received an MD degree from the Medical College of Wisconsin, in Milwaukee, in May 2008. He is doing his residency in radiology at the University of Minnesota, Twin Cities.

Paul Schmeidel ’04 has been promoted to project engineer at Soils and Materials Engineers Inc. in Shelby Township. He has worked six years for SME, a geoscience, materials, and environmental consulting firm.

Sonya Parshall ’04 and Wilmer Lidke ’05 got married in October 2009.

Brian Lang ’04 announces the birth of Elayna Sara Lang on 7/28/09.

Aly Klugow Renshaw ’04 married Scott Renshaw on 5/9/09 in Land O’Lakes, Wis.

Casey Velinbitt ’04 and Stefanie Block ’06 are engaged to be married on 6/19/10.

Ashley Blomberg ’08 and Ryan Plantz ’08 were married on 7/3/09 at Bluff Valley Park in Bessemer. The couple now resides in Austin, Texas.
In memoriam

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

1935
Donald W. Carmody
Eileen G. (Driscoll) Lawless

1937
Warren J. Amstutz
J. Alan Fowler
Dr. John M. Swanson

1938
Bernard N. Harris
Richard D. Holtz Sr.

1939
Bill W. Seaman

1940
William A. Benson

1941
Edward N. Nelson

1945
Jean F. Dimet

1947
Peter N. Handberg
Ward E. Peterson

1948
Irving C. Dupuis
Peter L. Miller
Robert B. Perket
Parke Potter
Kenneth M. Rieck
John J. Ruelle Jr.

1950
Irving C. Dupuis
Peter L. Miller
Robert B. Perket
Parke Potter
Kenneth M. Rieck
John J. Ruelle Jr.

1951
Dante Balagna
Charles R. Ehinger
Joseph Sikorsky

1952
Frederick C. Eaton
Carl V. Keranen
Raymond J. Ricci
Douglas A. Wokott

1954
William R. Corkin
William N. Parks

1955
Dr. Roland C. Hanson
Norman J. Heikkinen
Roger L. Vander Meulen

1956
Gerald R. Dufour
Paul L. Fehrenbach
Paschal E. Tommen PE

1957
James R. Doe
Charles T. Wilson

1958
H. Irwin Allen
John R. Fleishman PE
George R. Gildersleeve
Donny J. Lamb
Mary J. (Forrest) LeBeau
Lyman K. Oja
Gerald G. Ritchie
Robert C. Shubuski
A. Robert Turpin

1959
Kenneth W. Chase

1960
John W. Barto
Thomas R. Hertzel
Sally M. (Severson) Hooton
Ronald R. Kamarainen
Dr. Robert J. Kerber
Allan L. Purtill Sr.

1961
Kenneth W. Chase

1962
Frederick A. Roueche Jr.

1963
Eugene J. Kosiarcic
John R. Losse

1964
Roger T. Wikaryusz

1965
Karen M. (Sirtola) Chapin
Jeffrey H. Johnson

1966
Dr. Gordon C. Haber
E. Duncan Hollingsworth

1967
James R. Doe
Charles T. Wilson

1968
H. Irwin Allen
John R. Fleishman PE
George R. Gildersleeve
Donny J. Lamb
Mary J. (Forrest) LeBeau
Lyman K. Oja
Gerald G. Ritchie
Robert C. Shubuski
A. Robert Turpin

1969
John N. Lassila

1970
Richard T. Beaupre PE

1971
John E. Kappler

1972
Gene P. Allen
James L. Evan

1973
John E. Hall

1974
Gaynor L. Nash

1975
Kenneth M. Klumpp
Thomas E. Sehrt

1976
Andrew D. Williams

1977
Laurel B. (Baumel) Zechlinski

1978
Gregory G. Pines

1979
Kent L. Christopher
Mary Susan (Davetenla) Robinson

1980
Bruce J. Lambert

1981
Anna M. (Drew) Markstrom
Jill O. (Owens) Ziarko

1982
Michael D. Jablonski
Thomas A. Lufrenese

1984
Matthew N. Schmit
Charles E. Southwell

1985
Brian C. Keranen

1986
Michael B. Hall

2002
Robert J. Gagnon

2003
Raymond S. Carlson

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