# Michigan Tech MAGAZINE

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Witness to Pearl Harbor ■ Amazing feats of engineers ■ Student haute cuisine

Michigan Tech

*Create the Future*



### Cover

Fundamental to the Michigan Tech experience is the sense of place that arises from the Keweenaw's woods and waters. Chief among the inland waters is the Pilgrim River. A short drive from campus, it has been a haven from the trials of academic life and a touchstone for alumni for generations, as well as a natural laboratory; fish biologist Casey Huckins brings his students here every fall. Now access to the Pilgrim is in jeopardy. In response, a coalition led by members of the Tech community has come together to preserve access to this wild place.

### Inside cover

The Northern Lights put on an exceptional show October 25. Photographer Sarah Bird captured this image at McLain State Park.


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# Save the Pilgrim!

*by Dennis Walikainen '92 '09*

That's the battle cry of alumni, faculty, students, and community members fighting to keep the Pilgrim River pristine. If they are successful, future generations will still be able to explore, fish, hike, and savor this slice of heaven so close to town.

"Just look at this," says Dana Richter '89, a research scientist in the School of Forest Resources and Environmental Science and president of Copper Country Audubon, as we drive along on Pilgrim Road, just minutes from campus. "The river runs along the fault from the Traprock Valley to Mass City, and it's a beauty," he says.

As we walk down through the wet grass, we have a clear view of the green-and-gold hillsides flanking the water on this early autumn day. The river works its magic, riffling over rocks, pausing in pools. It's not that hard to get here; there are hiking trails nearby, and a short venture has us down to a spot where a fallen tree crosses the river with promises of deep trout pools there and around a bend.

For decades, Michigan Tech students and alumni have been able to bring rod and reel or just their own adventuresome selves down to this wild place only a couple miles southeast of campus. They have been welcome thanks to the good graces of the owners—nearly all of the land on either side of the Pilgrim

*The Pilgrim River Watershed Project brings together in common cause alumni with very different reasons for loving the river. Angler Bill Leder '68, left, of Trout Unlimited spearheads the effort. Birdwatcher Dana Richter '89, right, offers the perspective of the Copper Country Audubon Society. John Ollila '69 was raised on the river and wants to give everyone the chance to enjoy the land he has loved since childhood.*

River is in private hands. Now, however, the river valley is attracting the eye of developers. For those who cherish a ramble here, the time for preservation is now. Houses and new roads are springing up, and there's nothing to abate future growth.

The Pilgrim River Watershed Project hopes to change that. A coalition of seven local organizations—the Copper Country chapters of Trout Unlimited and the Audubon Society, the Northwood Alliance, the Houghton Keweenaw Conservation District, the Keweenaw Land Trust, the Keweenaw Trails Alliance, and Partners in Forestry—is working together to guarantee public access to 1,382 acres surrounding three miles of some of the most scenic forestland in the Pilgrim River valley.

The property is owned by Joe and Mary Hovel, members of the Northwood Alliance. The couple purchased two parcels adjoining the Pilgrim with the aim of sustainably managing the forest and keeping the land open for compatible recreation, including activities ranging from hunting and fishing to berry picking and bird watching.

The Pilgrim River Watershed Project has been working to secure conservation easements from the Hovels, assuring public access in perpetuity.

It's a big effort, says Bill Leder '68, an adjunct professor of civil and environmental engineering and a board member of Trout Unlimited. "But for outdoor recreation enthusiasts, the effort is more than worth it."

For Casey Huckins, a member of Trout Unlimited and an associate professor in biological sciences, the Pilgrim is both a pristine trout stream and a living laboratory. He has been taking students to the Pilgrim for a decade, focusing on trout and stream ecology. In addition to brook trout, he's seen coho salmon, sculpin, steelhead, and many other species here.

"It's such a great resource to have for teaching," he says. Recently, Huckins brought students there to conduct a fish survey using electrofishing, which briefly stuns the fish so they float to the water's surface, where they can be captured and then released alive. The class looked at size, species, and age of the fish, while also analyzing the condition of the habitat.

The river is also a resource—and a passion—for students in other disciplines. Civil engineering

*Students John Trochta, Michael Nagel, and Alicia Sherrin survey fish in the Pilgrim River as part of one of the few Tech classes requiring chest waders.*

## The river is both a pristine trout stream and a living laboratory, where students can immerse themselves in a riparian ecosystem a short drive from campus.

master's student Casey Fritsch has been assessing the riverbed to better understand the watershed and identify potential stream restoration projects. Andrew Orthober, a master's student in environmental policy and member of Trout Unlimited, just appreciates what the river offers so close to campus.

"It's an important ecosystem for fish and a corridor that supports a lot of wildlife," he says. "There's even a pair of eagles near the mouth." He's caught brook trout and rainbow, but exactly where will remain a mystery.

Michigan Tech students have probably been fishing the Pilgrim as long as there has been a Michigan Tech. Among them is Bill Deephouse '64 '71, a member of Trout Unlimited, the Audubon Society, and the Keweenaw Land Trust.

"In the 1960s, when I was a student, I caught a twenty-inch brown trout within sight of the US-41 bridge," he remembers. Later, he passed on the tradition to youngsters from Michigan Tech's Summer Youth Program. "And we caught several large steelhead and brook trout."

Deephouse's love of the river begins with fishing but also involves projects like "pushing rocks around" to stop bank erosion. "The goal, ultimately, is to protect the whole watershed," he says. "All of us involved in the project have a strong allegiance to it."

Probably no one has a greater allegiance to the river than local landowner John Ollila '69. He is offering his 250 acres to the project through outright donation and through easements, "because it is the right thing to do," he said. "I've been looking for a group to be the conservator for twenty-five-plus years."

Ollila's grandparents ran a dairy farm on the land, and his parents operated a strawberry farm. Today, one of the Pilgrim's best access points is on his property, giving everyone a chance to enjoy the land he has loved since childhood.

It's from one of those access points that Richter, president of the local Audubon Society, guides our steps down to the river. For him, the allure of the Pilgrim is its birdlife.

"Songbirds are dependent on these woods for nesting and habitat," he says. "In spring, you can hear the melodies of thrushes, warblers, and vireos high in the trees."

And if the Pilgrim River Watershed Project is successful, future generations of Tech students will continue to hear those melodies as they cast their lines hopefully into the Pilgrim's pools of dark, fishy water. ■

**Find out more on TechTube** A video on efforts to preserve public access to the Pilgrim River is posted at www.techtube.mtu.edu/pilgrim.

# Simple gifts

*by Marcia Goodrich*

Karl Evenson hadn't expected to hear his name called during the big welcome-to-Michigan Tech address the University holds for all new students in August. And as he loped down to the floor of the multipurpose room from the top of the bleachers, his excitement was evident.

Later, the freshman from Mahtomedi, Minnesota, explained why. "It felt really nice to have some security as to how I was going to pay for my books," he says. "This semester, they were about $725. Books are kind of expensive."

The money—a check for $1,000—came from a group of people who could empathize about the cost of textbooks. "Last spring, all graduating students were given the opportunity to make a gift before leaving campus," says Paula Nutini '85, director of annual giving for the Michigan Tech Fund. For a ten-dollar donation, graduates could include a thank-you message in the program that audience members receive at the graduation ceremony. "They could thank Mom and Dad for their support, and their parents and grandparents could read it in the stands," Nutini says.

"We used the proceeds to fund a scholarship we gave to an incoming student at orientation," she says. "[Michigan Tech] President Glenn Mroz drew the name from a box. It was totally random."

All those little gifts added up to enough to solve one student's big problem. That shows the power of giving, and Nutini hopes it will inspire next year's Class of 2012 to invest in even more thank-you notes to their parents. "It would be great to give out two scholarships next summer," she says.

*Karl Evenson stands with his homemade skateboard outside the bookstore, where he spent most of his surprise $1,000 scholarship.*

## A gift of freedom

Michigan Tech had only four endowed faculty positions when the Generations of Discovery Capital Campaign began. That needed to change; endowments are one of the best ways to attract great faculty members and keep them here. Now, the University has seventeen endowed chairs and professorships and hopes to add more.

Among the recipients is Gordon Parker. He fills the new John and Cathi Drake Endowed Professorship in Mechanical Engineering, which the Drake family funded through a $1 million gift.

"It's been incredible," says Parker, a winner of the Michigan Tech Distinguished Teaching Award and a highly productive researcher.

Unless you are immersed in academia, you probably don't know how much a faculty member's career can revolve around the search for money. Funding from corporations, government agencies, and foundations drives most research in engineering and the sciences. And in the absence of support, a promising area of inquiry can languish.

Endowments change all that. "The funds from the professorship have allowed me to do some really interesting exploratory work," says Parker. "All my other funds are tied to deliverables, like reports, but I can use these just to explore topics that could lead to wonderful things."

The Drake Professorship is supporting two projects by underwriting the expenses of graduate students, who serve as research assistants. "And because the funds support my students, it's not just me who benefits," says Parker.

In one project, his team is investigating ways to improve microgrids: modern, small-scale electrical grids that serve a community, office park, university, or similar entity. In the other, they study wind-turbine controls, with an eye toward offshore wind-energy production.

The Drake funds are "seed corn," he says, giving enough heft and credibility to a line of inquiry to attract outside

support. Parker's microgrid research has already received significant funding from Sandia National Labs.

John Drake is a longtime supporter of Michigan Tech. "The thing that sold me on the endowed professorship was not just basic loyalty to Tech," he said. "I've seen Bill [Predebon, chair of the mechanical engineering–engineering mechanics department] giving the department a new direction, a good direction."

Drake earned two degrees from the University, a bachelor's in mechanical engineering in 1964 and a master's in business administration in 1969. Not long after, he founded Drake Manufacturing Services, in Warren, Ohio. In 2007, he sold his successful business and used some of the proceeds to finance the John and Cathi Drake Endowed Professorship.

"Cathi and I worked with Bill and Eric [Halonen, director of major and planned giving], and they demonstrated that there was a need," he said. "Plus, this was a way for us to do something in our lifetime, rather than wait until we were gone."

For his part, Parker says, "I always like to express my thanks to the Drakes, not only John and Cathi but the whole family. It's a humbling and profound experience to have their name next to my door. And it's a big responsibility. After me, there will be other John and Cathi Drake Professors, and I want to leave a good legacy."

## Building for now and later

Generations of Discovery: The Campaign for Michigan Tech is built on small gifts and large, and every one counts. They all drive the University closer to its ambitious goal of raising $200 million by June 30, 2013. But there is more to this fundraising effort than raising funds.

"There are really two purposes to the campaign," says Shea McGrew, the executive director of the Michigan Tech Fund. "One is obvious: we want to raise a certain amount of money for current priorities that will help us realize the goals of our strategic plan.

"The less obvious part is to put in place a strong culture of giving among alumni and current students. We don't have much choice if we want to maintain our quality. As our public funding goes down, we need to replace it with giving from individuals, corporations, and foundations."

The main thrust of the campaign has been to build the University's endowment, which is primarily made up of gifts designed for scholarships, fellowships, and endowed professorships and chairs. In particular, the campaign is focused on endowing faculty positions, like the Drake Endowed Professorship.

"It's right there in our strategic plan," says McGrew. "We want to bring in good people and support them. You can't have a great university without a great faculty, and that's what endowed faculty positions support."

Student support is a close second, both endowed scholarships and immediate gifts, like that provided by the Class of 2011. "This does not mean that we aren't trying to fund capital projects," McGrew stressed. Some of the campaign's biggest successes are capital projects built entirely with private donations, like the new Seaman Mineral Museum building and the Paul and Susan Williams Center for Computer Systems Research. "But the overarching goal is to support people."

Among those people, of course, is freshman Karl Evenson.

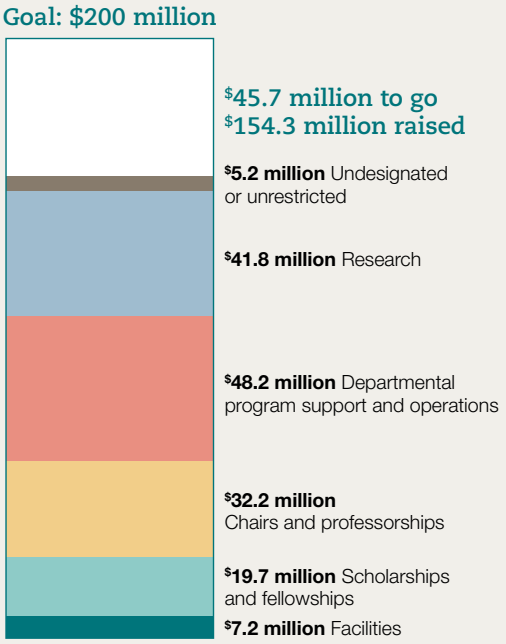
"The scholarship has definitely made my life easier; I'd like to thank those graduates who gave the ten dollars. When I graduate from Michigan Tech," he promises, "I'll do the same." ■

*The Drake Professorship gives Gordon Parker freedom to explore intriguing lines of inquiry.*

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

Where you are directing your campaign dollars

To learn more about choosing where your money goes, visit www.mtu.edu/giving.



# AMAZING FEATS of ENGINEERS

When you ask nine-year-olds what they want to be when they grow up, they probably won't say "an engineer." That's too bad, because engineers do amazing things.

Unfortunately, most people don't know just how amazing. So, for the sake of enlightenment, we asked Michigan Tech engineering alumni to tell us about some of the biggest hurdles they have faced in their careers and how they overcame them. A few of you responded with tales that show what a huge impact engineers can have on their companies, their profession, and their communities.

Here are four of your stories.

# Bridge over the River Colorado

*by Bonnie Klamerus '83 '91, BS in Civil Engineering*

Working for a unit of the Federal Highway Administration, I was the structures manager for the Hoover Dam Bypass Project, whose centerpiece was an arch bridge that spans the Colorado River and links Arizona and Nevada. It was pretty darn hard. Daunting. A bridge engineer's dream and the biggest challenge I've ever had. Coming from Baraga, Michigan, I had difficulty imagining the sheer ruggedness of the steep canyon walls and caverns. The terrain was fit for the desert bighorn sheep inhabiting the area.

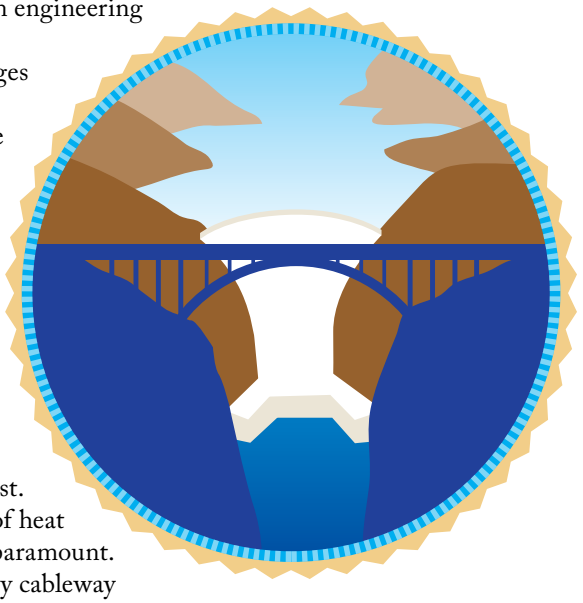
The bypass, just downstream from the Hoover Dam itself, was begun in 2001 and completed in 2010. It cost $240 million. The Colorado River Bridge deck is 900 feet above the river, 1,900 feet long, with twin arches that span 1,060 feet. It is among the biggest, longest, and highest bridges of its kind in the world. The engineering challenges were imposing. Just think of a survey shot from an instrument on the canyon walls to a point 1,000 feet away—not an easy task when you are looking at fractions of an inch in accuracy.

Merely getting to the site was a big job. It took 150- to 200-foot cuts and fills on two miles of approach roadway in Nevada and on one mile of approach roadway in Arizona. The Arizona approach has two bridges; the Nevada approach has five bridges. When you're talking $30 million for one mile of road and bridge work (not including the main river span), you know you've got extreme site conditions.

Twin parallel tower systems, 325 feet high, supported overhead cableways that were erected by helicopter, aligned with the arches, and used for the majority of the heavy lifting. To support the arch construction, 150-foot-tall temporary concrete towers supported an array of cables attached to alternating segments. The cableway, cables, and towers were dismantled when the project was done. It was like building a cable-stay bridge and then removing it after the arch was complete.

Each arch footing was the size of a two-story building. The arches themselves were cast in place, segment by segment. The six-foot-long closure segment was poured at night to combat the effect of heat on concrete. As the sun rose, those who were awake watched and listened for signs of trouble, but the system worked well. The entire team paused to celebrate.

Designing and constructing a bridge in the shadow of Hoover Dam was awe-inspiring. We were conscious of working for seven years downstream from one of the seven engineering wonders of the world.



The daily physical challenges faced by the workers were mind-blowing. To watch the physical and mental toughness of the laborers and tradesmen trudging up the stairs of the arch, carrying sacks of cement or hoisting rebar, or perched at precarious heights, in that environment, day after day and year after year, forced all of us to work harder and push each other to be the best. Workers bore the extremes of heat and wind. Their safety was paramount. The collapse of the temporary cableway system, which was the contractor's issue and not the overseers' fault, did shake the confidence of the team. Nobody was injured, but the mishap stalled the bridge construction by about two years.

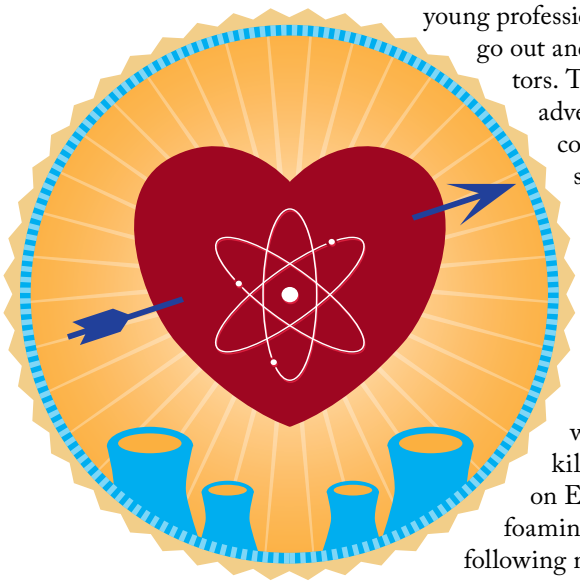
Working on this project has been the crowning achievement of my career. Overall, I attribute my success to good people around me, a good education, and persistence and hard work—what I call Upper Michigan traits and Michigan Tech traits.

# Introducing Mr. Atom and other perils of a nuclear engineer

*by Ray Berg '70, BS in Electrical Engineering, concentration in power systems*

I graduated in June 1970 and began working for Detroit Edison Company. After getting an MS in Nuclear Engineering from the University of Michigan, I joined Edison's Fermi 2 Nuclear Power Plant engineering team in 1976. I became a systems engineer when the "systems" concept of engineering was just beginning to infiltrate both power plant and automotive design. It was a great experience, and I was really enjoying myself.

One day, the VP of Nuclear showed up at my desk and "advised" me that it was essential that I join the Detroit Edison Speakers Corps and go out into the community and educate people on the true facts of nuclear power, as the anti-nuclear movement was ramping up. The company wanted its young professionals, not the old fogeys, to go out and debate the young protestors. They put me through a brief adversarial public speaking course and sent me out. It started easy with friendly groups like Kiwanis Clubs and elementary schools (I introduced our friend "Mr. Atom"). But then I graduated into heavy-duty assignments like debates at the University of Michigan, where I was called a "baby-killer" and "Satan's agent on Earth" and had very angry, foaming-at-the-mouth people following me to my car. I had blood thrown on me at one event. But I learned to handle all this and take it in stride, and I actually got to be somewhat friendly with several of my regular anti-nuclear pursuers.



Then Three Mile Island happened on March 28, 1979, a date forever burned into the memory of all nuclear engineers of the time. Detroit Edison reacted, as all utilities did, by immediately forming a safety review task force and promising a top-to-bottom review of the design of their nuclear power plants. I was assigned to be the task-force coordinator for Fermi 2, to get forty or fifty people to react, think outside their comfort zones, and move fast. I was sent to Washington, DC, the next day to meet with the Nuclear Regulatory Commission. On the airplane down, everyone was reading newspapers with big headlines about the developing "disaster": Was the plant melting down? Would Pennsylvania become a dead zone? Then the guy next to me on the plane says to me, "And what kind of work do you do?" Yikes . . .

I worked non-stop for twelve months on this overall safety review. It turned out to be the best professional experience of my life. I learned that plant up and down and gained knowledge that benefited me the rest of my professional career. And best of all, Detroit Edison relieved me from having to go out on the public speaking gigs while I was doing it. But that adversarial experience turned me into a fearless public speaker. And I kept the shirt with the bloodstains as a memory.

Michigan Tech did a great job getting me ready for this!

# She saw 3D under the North Sea

*by Patricia Henderson '77, BS in Geophysics*

I was the first person to interpret three-dimensional seismic data in the Norwegian Sector of the North Sea. This was in the early 1980s, back when I was doing oil exploration for Mobil, and the thought of a three-dimensional cube of data was beyond most people's comprehension. But I was a big proponent of it.

Our first challenge was to gather the seismic data so that it might be interpreted in 3D. Fortunately, we had access to pioneers in seismic visualization who laid out our first "shooting diagram." Once we got the data, the next challenge was to process it. The software capable of doing that hadn't been invented yet, but the guys in the processing center tweaked the two-dimensional processing software so it could handle this new 3D cube of data.

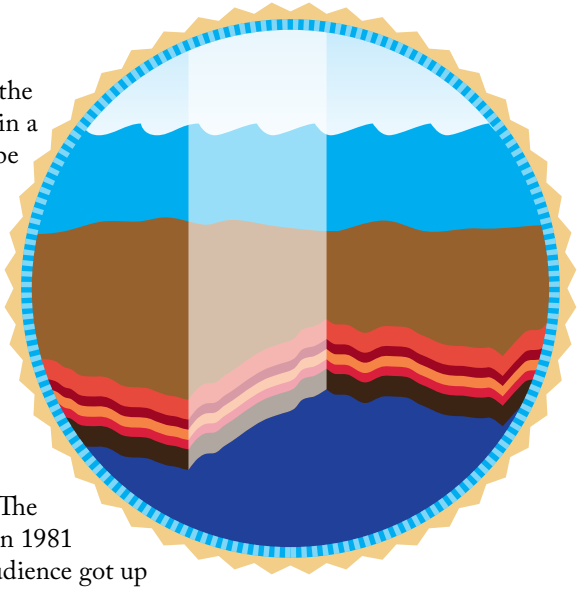
The last hurdle was interpreting it.

Back then, we didn't have the computing power to handle this huge amount of data. So, I devised a way to create each inline seismic line [a vertical section of the Earth created from a seismic energy source, like dynamite, with reflections showing the different

layers of rock in the subsurface] on a separate sheet of Mylar, which is like thick cellophane that you can print on. In any given 3D survey, there are hundreds of inlines and just as many cross lines to interpret. We put these Mylar sheets on a light table and shined light through all the different vertical inline sections. Then we would note, by hand, the timing of the rock reflections we were interested in on each of the lines; roughly speaking, these are echoes that tell you a feature's depth under the Earth. Then we created a map from this and hand-contoured the subterranean layers of interest.

Finally, we had to find a way to look at this cube of subterranean data in horizontal slices. So, a company called GSI (Geophysical Services Inc.) created a machine that would allow you to load all the slices of data on a film reel. And we'd put tracing paper with our map contours on the paper on a big screen. Then these displays of data would come up, and we could fine-tune the contour amplitude maps.

The next year I worked with a team from GECO, the geophysical company of Norway, that built one of the first 3D seismic workstations. We found a way to load the information that was on the Mylar sheet onto a computer and store the information electronically in a cube-like form that could be mapped.



Now, of course, we can bring the 3D seismic data directly into a computer, and it's almost instantly on your computer screen. Back then, what we did was a big breakthrough.

I ended up teaching all over the world on how to interpret 3D seismic data. The first time I gave a speech, in 1981 or 1982, someone in the audience got up and said "How can you believe in this wizardry?" I said, "3D seismic is not wizardry, nor is it a religion that you have to believe in. It's science."

It's unbelievable how far we've come in thirty-five years. At the time it was just fun. We were young, and people would say, you can't do that, and I'd say yes I can. We just gotta figure out how.

# Deodorizing a stinky chemical plant: It's all in the stoichiometry

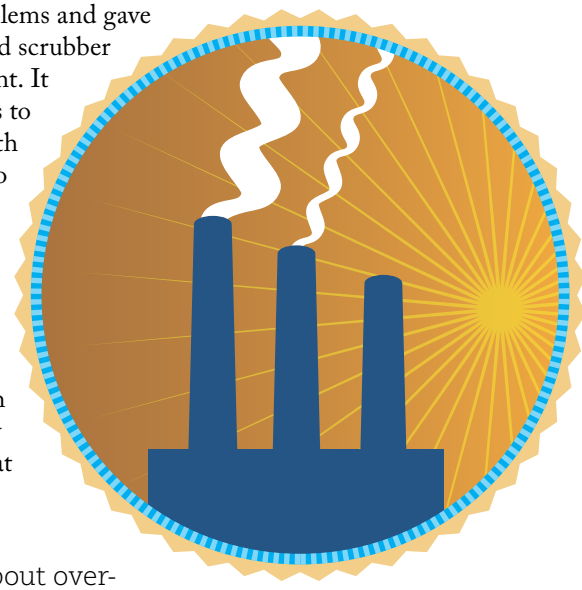
*by Greg Edwards '79, BS in Chemical Engineering*

I'm now in Arizona doing hazardous waste management and some air pollution control work. But this comes from my time working for the Michigan Department of Environmental Quality (which no longer exists), Air Quality Division.

I was reviewing a permit application from a manufacturer of pool chemicals. They were proposing a scrubber to reduce both chlorine and bromine emissions. As a chemical engineer, I knew the evaluation of the scrubber should have been a simple gas/liquid extraction tower problem. As you may have guessed, it wasn't, because the operators also didn't understand the process very well; it was like, "Hey, we just run it like corporate tells us and make the chemicals."

So I ended up doing a complete chemical engineering review of their production process: stoichiometry, flows, heat balance, mass balance, throw in a little kinetics for good measure. It turned out corporate hadn't done a process review in several years, and they weren't too happy about me reevaluating it. However, it was putting out significantly more emissions than it should have, and this is what was causing problems for the scrubber.

Once I detailed the problems and gave them suggested process and scrubber redesigns, they saw the light. It took me about two months to get through everything with them and convince them to make changes.



Epilogue: After they made the changes, they saw a huge decrease in odor complaints from the community, and they were getting better product with less material waste. I really appreciated my education at Michigan Tech!

**Even more amazing feats of engineers** Do you have a story about overcoming a big professional challenge? We'd love to hear about it. Email the editor, Marcia Goodrich, at mlgoodri@mtu.edu.

# Nouvelle cuisine, student style

## *Beyond Pop Tarts and ramen noodles*

*by Kara Sokol*

## It's two o'clock in the morning. Do you know what your student is cooking?

A warm, savory biscuit, flattened and crispy, drizzled with fresh thimbleberry jam and eaten with the hands.

Paula Deen comfort food? The latest *Top Chef* quickfire challenge? Nope, it's a "biscake"—a biscuit-pancake hybrid created for hungry dorm-dwellers by environmental engineering major Chris Paquette.

Chris's next-door neighbor, Danny Messinger, recalls the night Chris developed his splendid concoction.

"He has an appreciation for real food," Danny says of Chris, who could often be found cleaning fresh-caught smelt in the community bathroom (much to the dismay of their resident assistant). "We missed home-cooking sometimes, and that night we really wanted pancakes. Chris had a new George Foreman grill, and he wondered if there was a quick and easy way he could make them himself."

Indeed there was. Chris bought two tubes of pre-cut refrigerated biscuits and cooked them flat for two or three minutes each, or until grill marks appeared on the dough. He served them warm and buttery to hungry hallmates, who slathered them with jam, drizzled them with honey, or bathed them in pure maple syrup.

"Chris made twenty biscakes and still didn't have enough to feed everyone who wanted them that night," Danny says. "They were delicious."

Though residence dining halls offer a huge variety of handmade, healthful, and delicious fare (especially compared to the olden days), students will always crave a satisfying dorm nosh. When the hankering for home cooking strikes at 2:00 AM, Tech students look beyond the traditional ramen noodles and get crafty.

Case in point: vegetarian microwave chili à la Jess Banda, a fifth-year scientific and technical communication major studying global technological leadership. It's a definite cut above Hormel: Jess's recipe calls for slicing a fresh onion and a bell pepper and mixing in bottled salsa and cans of diced tomatoes, red beans, black beans, and hominy or corn, all combined with a package of chili seasoning. Microwave until heated through and voilà—chili that's pretty darn close to what Mom used to make.

Creative cuisine exists beyond the residence hall as well. Students often say it's more difficult with their own apartments and kitchens; navigating recipes can be overwhelming, and buying groceries is tough when you're on a budget so tight it squeaks.

Third-year wildlife ecology major Kiri Kennedy's solution: nomlettes. Urban Dictionary defines them as "Non-omelets of omnomnom proportion" (translation: yummy omelets). The recipe calls for eggs and a lot of imagination; the innards can include tater tots, onion rings, French fries, macaroni and cheese, or virtually anything else left in your fridge. Kiri fries them up with cooked and seasoned ramen noodles. She has just one word for it: "Delicious!"

And for dessert? Karin Van Dyke '78 attended Tech before the days of microwaves in rooms, so she and her friends had to get extra creative in indulging a sweet tooth.

"We used the little Farber electric hot pots to cook up Nestlé cocoa drink mixes—European blend," Karin says. "We dipped cinnamon graham crackers. It was the perfect dessert."

Every savory meal deserves a sweet ending. ■

*Chris Paquette's biscakes were so popular that students would line up in the hallway for a chance at a bite, his roommate Danny Messinger remembers.*

**What were your college culinary staples?** Did you have any especially crafty and delicious concoctions? We'd love to hear about them—share your stories at www.mtu.edu/magazine/student-food.

# Witness

*by Marcia Goodrich*

By all logic, John Kline should not be sitting in his comfortable Marquette living room, regaling visitors with stories about his years in the US Navy. Yet here he is, World War II memorabilia spread out before him, chatting amiably about one near-death experience after another.

From his earliest days, Kline '49 has made a specialty of dodging bullets, both literal and figurative. The first calamity he remembers was falling head first into a rock-lined basement back in 1927 or so, when he was three or four years old. "My mother staunched the bleeding with spider webs," he recalls.

Kline emerged unbloodied from his second big disaster, unlike 3,684 other American servicemen who became casualties of war on December 7, 1941.

The scrawny 18-year-old from Laurium had enlisted a year earlier and was serving on the battleship *USS Nevada,* anchored in Pearl Harbor. He was on duty in the pump room, six levels below deck, when he heard loud banging noises, "like steam lines hammering."

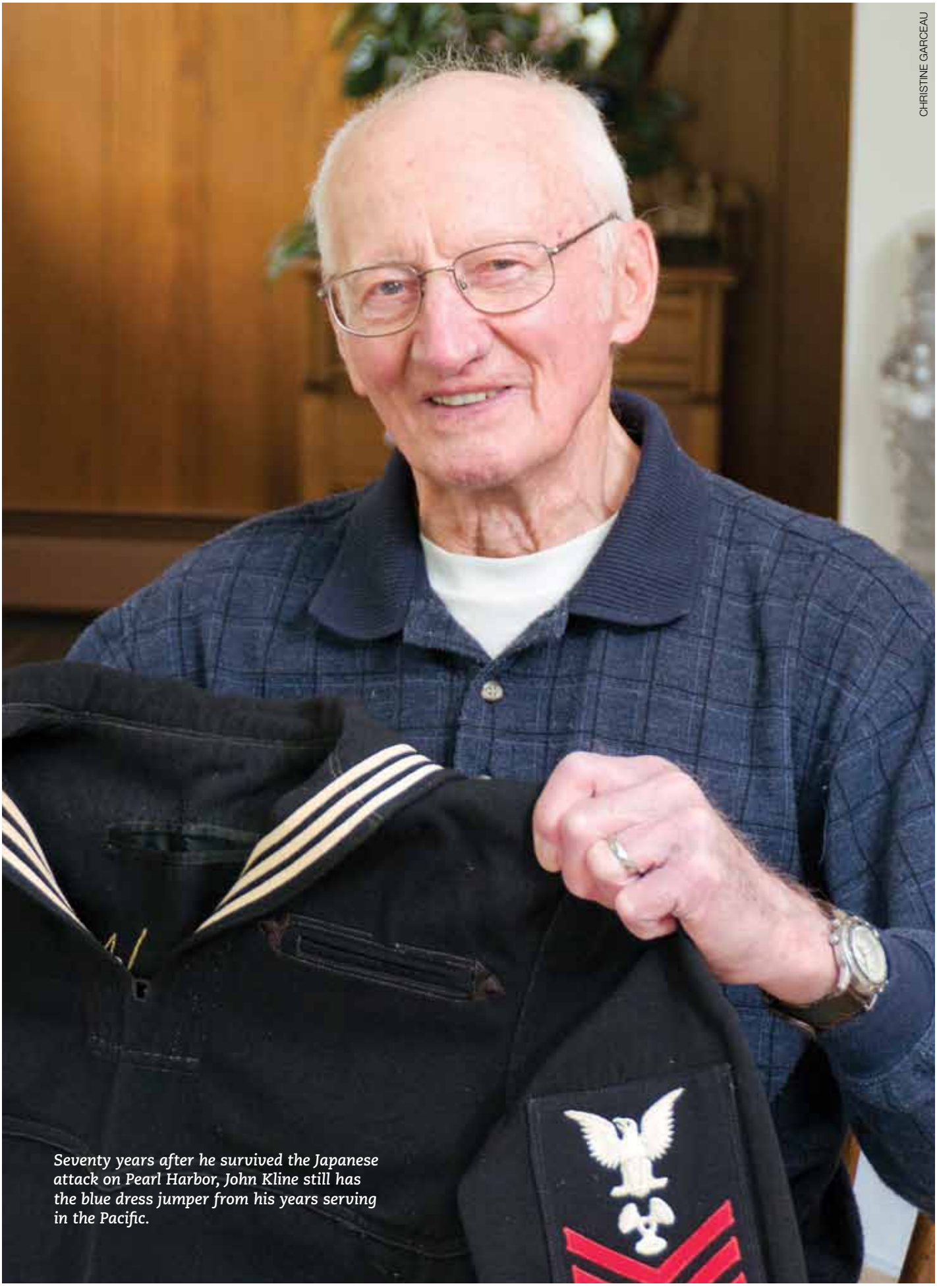
Kline trotted off to the boiler rooms to make sure everything was OK. About that time, other crewmen arrived with unbelievable news: Pearl Harbor—along with the *USS Nevada*—was under attack. They were met with skepticism. "We took awhile to be convinced," he says. Finally, their first petty officer opened their eyes to the gravity of the situation. "He was shouting 'The Japs are coming!'"

Kline reported to his battle station, a powder magazine, and began running gunpowder to the upper deck. He could hear the battle raging above his head. "We passed powder up so fast they couldn't handle it for awhile," he recalls. "Then, when the ship started to sink, they flooded our magazine." The *Nevada* was hit early, and, when it began to list, the crew deliberately flooded portions of the ship to keep it upright. Eventually the *Nevada's* guns would bring down four Japanese planes.

Once on the third deck, Kline and his shipmates lined up to be issued rifles. "Some guys fired guns on deck at the Jap planes flying right over us," he remembers. There weren't enough small arms to go around, however, so Kline and others began to prepare for firefighting and rescue operations. "We tore down bunks for stretchers, tore mattress covers for bandages, cut open gas mask cans, and were assigned to fight fire forward," he says.

Of the eight battleships damaged at Pearl Harbor during the surprise attack, the *Nevada* was the only one able to maneuver. After being torpedoed and hit by at least five bombs, however, it was grounded to avoid sinking in the harbor's channel, where it would have bottled up what remained of the fleet.

"The day passed so fast," says Kline. "When things started to settle down, we reported back to our divisions. At the time, the ship was aground next to a cane field [a place that would be known as Nevada Point]. I stood watch in the No. 2 Pump Room and had fifteen minutes on and forty-five minutes off throughout the rest of the day and night, due to the heat and lack of air."



CHRISTINE GARCEAU

*Seventy years after he survived the Japanese attack on Pearl Harbor, John Kline still has the blue dress jumper from his years serving in the Pacific.*

*The USS Nevada, beached and burning after the Pearl Harbor attack. Sixty of its crewmen died during the surprise Japanese assault.*

Was he ever scared? "Not really," Kline says. The harbor was shallow, so he didn't worry about drowning in deep water. And the raw excitement of the battle kept fear at bay; everyone focused on shooting down planes, fighting fires, rescuing their shipmates, and just trying not to get hit.

Over the following days, Kline and thousands of other survivors joined in the cleanup. "Having lost everything but what we had on, we were given toilet articles, clean clothes, and two meals a day," he remembers. "We were sleeping in a bowling alley, lined up on the lanes. We'd sleep crosswise. Your head would be in one gutter and your feet in another."

It was sad and grisly duty. "When we ran into bodies in the debris, we called corpsmen, who then dug the bodies out," he says. Sixty men had died on the *Nevada*; overall, 2,402 were killed and 1,282 wounded in the Japanese attack.

Kline picks up an old prescription pill bottle and unscrews the top. Inside is a length of black ribbon, rolled tightly and fastened with a pin. He straightens it out; on the ribbon, in faded yellow letters, is printed "USS Nevada."

At one time, sailors all wore hatbands like this, he says, each bearing the name of his ship. The practice was banned before the Pearl Harbor attack, however. "They caused a lot of fights in the bars," Kline explains lightly, in a tone that suggests direct knowledge.

Kline found this particular hatband hidden inside a cap he retrieved while cleaning up the Nevada's deck. He never knew who the owner was or whether he lived or died. "It still has the oil spots on it from the attack," he points out. "I used to wear it on my hat during Pearl Harbor Day."

He kept the ribbon in his shoe. The cleanup crew's dirty clothing was washed and replaced with clean items during their daily shower, and Kline feared the ribbon would be lost if he ever parted with it.

Months later, after the *USS Nevada* was refloated, he received a check in the mail for $27.87, the amount of money he'd left behind in his locker. It was a lot of money back then, Kline remembers. His monthly paycheck was $21.

On December 14, Kline boarded the aircraft carrier *USS Lexington.* It was a momentous occasion: "Chow for breakfast was ham and eggs," he remembers fondly. Edward "Butch" O'Hare was also stationed on the *Lexington,* and Kline was there when O'Hare returned from his legendary Medal of Honor flight over the Pacific, when the fighter pilot singlehandedly took on a formation of eight bombers. O'Hare shot down three, and anti-aircraft fire dispatched the rest. He would perish later in the war; his heroism would prompt Chicago to rename its airport in his honor.

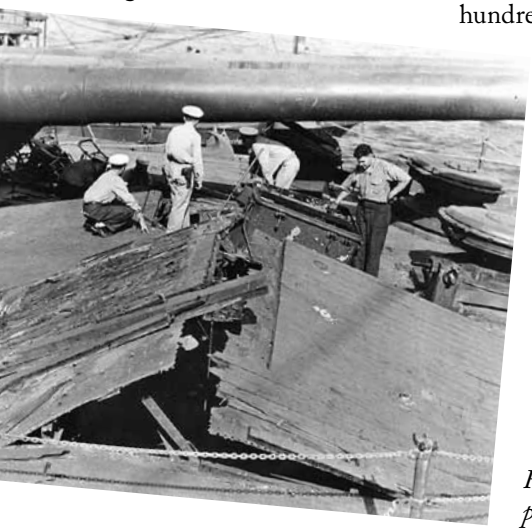
**On the way to the hospital, the driver gave him some advice: "Tell them it hurts like hell."**

Soon thereafter, the ship returned to port. "While we were provisioning the ship, we were a human chain, passing food to the storerooms," Kline said. "At that time, I became sick with abdominal pain." He went to sick bay and was quickly transferred to the hospital ashore, in Honolulu. On the way to the hospital, the driver gave him some advice: "Tell them it hurts like hell."

Kline did as he was told and was immediately sent into surgery. "My appendix burst while they were looking for it," he says. He was laid up for three months, which meant that he wasn't on board when his ship was deployed to the South Pacific. Again, Kline dodged a bullet.

"While I was in the hospital, the *Lexington* sank in the Battle of the Coral Sea," he says. Three hundred men died.

*Bomb damage to the* USS Nevada. *The ship was refloated and later repaired at Puget Sound Naval Yard.*



Kline was reassigned to the *USS Barnes,* where he experienced another near miss. A fighter pilot lost control while attempting to land and hit a nearby sailor, killing him.

He was discharged from the navy in July 1946, as a machinist mate first class, and in September enrolled at Michigan Tech. He graduated three years later with honors and a BS in Mechanical Engineering. Kline joined the Army Corps of Engineers in 1950 and married his wife, Joyce, in 1951. They have four children and seven grandchildren. He would go on to help build K. I. Sawyer Air Force Base, in Gwinn, and serve there as a civilian engineer with the US Air Force from 1965 until his retirement in 1985.

Kline occasionally receives letters from schoolchildren wanting to know about his experiences in Pearl Harbor, and he answers them all.

Does he ever wonder how he managed to survive to tell the tale?

"All the time," Kline says with a smile. "I'm on my second pacemaker." ■

*Note: Portions of the above story appeared originally in the December 7, 2009, article "Pearl Harbor Remembered," by Steve Brownlee and Hyonhee Shin, and are reproduced here with the permission of* The Mining Journal.

# Universities key to Michigan's revival

*by Marcia Goodrich*

If you want to revitalize Michigan, Dave House told Governor Rick Snyder, look to its universities.

House '65 was a special guest during a panel discussion with Snyder, held in Kalamazoo October 10 and sponsored by the Council of Michigan Foundations as part of the Reinventing Michigan conference. He shared his thoughts on the topic later during a visit to Michigan Tech.

"I told them new jobs come from technology and innovation, and universities are the crucible of innovation," said House. "I used Silicon Valley as an example of where that's happened. The difference between what I see in Michigan and Silicon Valley is the way industry and universities work together."

House noted that the origins of Silicon Valley trace back to Stanford University, but it wasn't university discoveries alone that drove its growth; it was its people. Stanford professor Fred Terman earned the title "Father of Silicon Valley" by encouraging post-war graduates like Hewlett, Packard, and Varian to stay in the pastoral Santa Clara Valley and start their own companies instead of leaving for the big city. "He thought in terms of helping students," House said, "but the end result was a flourishing center of innovation." Today 40 percent of all US venture capital funding goes to starting Silicon Valley companies, he said.

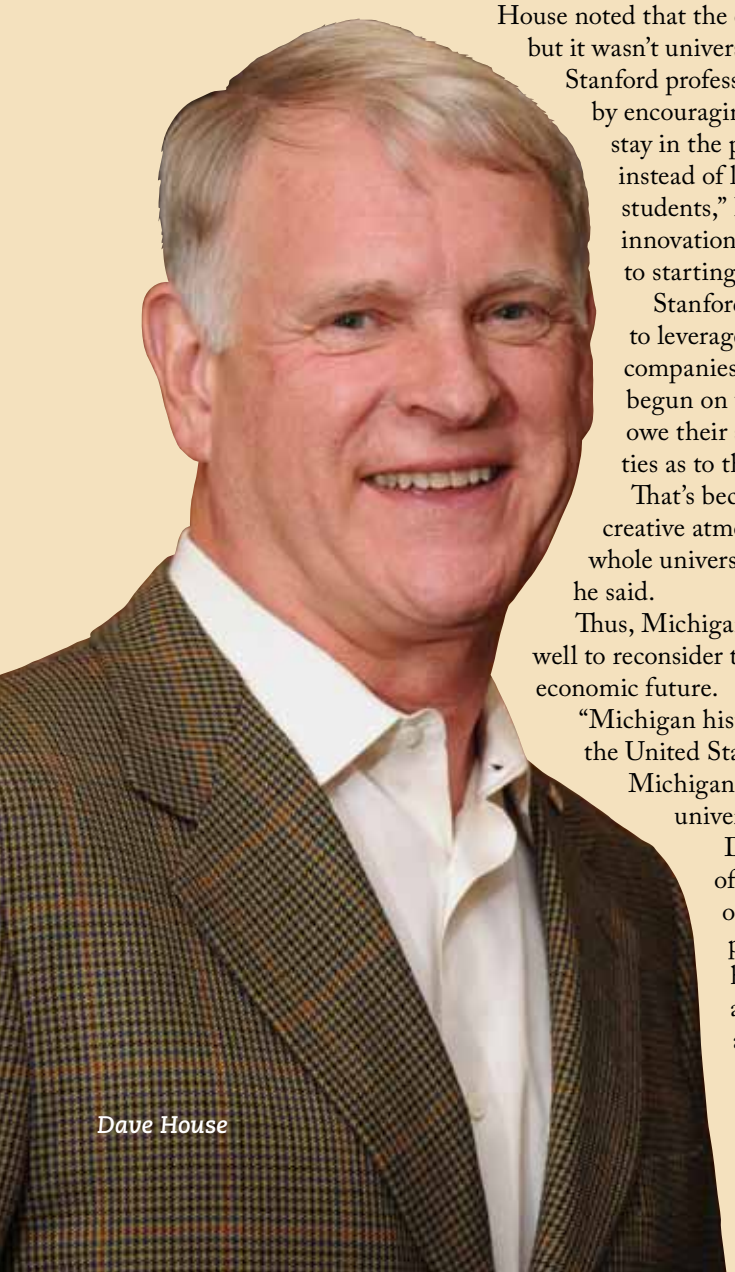
Stanford also encourages faculty to take sabbaticals in industry and to leverage university-based research and innovation to start up new companies. Businesses like Google and Facebook spun out of work begun on university campuses, and companies like Apple and Intel owe their success as much to the brainpower honed at nearby universities as to the inspiration of any individual.

That's because universities by their very nature can provide a heady, creative atmosphere, he said. "Graduate programs lead the way, but the whole university environment is an area of unconstrained thinking," he said.

Thus, Michigan, which has long focused on heavy industry, might do well to reconsider the role higher education can play as an incubator of its economic future.

"Michigan historically has had one of the finest university systems in the United States," said House. "So, bottom line, if you want to reinvent Michigan, look to your universities, especially your leading research universities."

Dave House is the chair of Michigan Tech's Generations of Discovery capital campaign and chairman of the board of Brocade Communications. Among his many leadership positions in electronics and telecommunications industries, he was a longtime Intel executive, CEO of Bay Networks, and president of Nortel Networks. He is board member and/or advisor to a number of Silicon Valley start-ups and founder and owner of House Family Winery in Saratoga, California. House earned a BS in Electrical Engineering from Michigan Tech in 1965. ■



*Dave House*


MARIUSZ NOWAK

# A STAR FROM THE EAST

*by Ian Marks*

Five years ago, Ali Haidar left his home in Lebanon to join the rest of his family in Ontario, where they had moved in search of a better life.

When he arrived, he found a sport he was born to play.

Haidar was a tenth grader at J. L. Forster High School in Windsor when one of the coaches spotted the 6-2 16-year-old in the hallway and asked if he'd ever played basketball.

Haidar had never set foot on a court. But by the following season he had earned the most-improved-player title for helping the team to a 24–6 record. In just his second year of organized basketball, he was named the team's most valuable player.

Jay Smith, an assistant basketball coach at the University of Detroit Mercy, watched Haidar play in a pick-up game and contacted Michigan Tech head coach Kevin Luke.

"Jay is a coaching friend of mine and told me he saw a kid from Windsor who wanted to be an engineer," said Luke. "Ali was pretty raw, but we liked him enough to have him come to Houghton for a visit. We were excited that he had only been playing hoops for a few years, because that meant he had a lot of room for improvement."

Haidar, who by then had grown to 6–7, enrolled the following summer and made an immediate impact. By the fifth game of the season, the freshman forward found himself in the starting line-up, averaging 9.9 points and 5.8 rebounds per game. That was enough to earn him another honor, this time as the top newcomer.

Haidar's skills continued to flourish in his sophomore season, and he earned first-team All-GLIAC honors. He finished fifth in the league in scoring at 16.1 points per game and seventh in rebounding (6.7 per game).

That's when he considered returning to Lebanon for an extended visit. "I contacted the Lebanon basketball federation about trying out for the team," said Haidar. "I sent them some tapes of me playing."

Those tapes so impressed the Lebanese basketball team they invited him for a summer tryout. In June, Haidar left his home in Houghton and headed to his other home, Lebanon, for the first time since he left for Canada in 2006. He was one of twenty-five players competing for twelve spots on the national team.

"All the guys on the team were very supportive of each other, but we would battle pretty hard on the court," says Haidar.

Haidar was among the top twelve and made his international debut at a tournament in Jordan, where the Cedars finished in fifth place with a 2–2 record.

"The play was very physical and fast, since the shot clock was 24 instead of 35 seconds. Everyone also had seven-footers on their team," said Haidar, who averaged about twenty minutes of action per game. After the tournament, he continued training with the team, but he also spent time with his family.

"My mother and siblings came along to Lebanon, and I was able to attend my sister's wedding. I also saw some of my friends from when I was growing up."

As the summer wound down, Haidar faced a tough decision: continue training with the Cedars and compete in the Asian Championships, where they might earn a spot in the 2012 Olympics, or return to Houghton, where the Huskies were hoping to climb to the top of the Great Lakes Intercollegiate Athletic Conference (GLIAC).

"I chose Michigan Tech because I wanted to earn my degree and help the Huskies win a championship," said Haidar, who carries a 3.1 cumulative grade point average in electrical engineering.

Tech ultimately benefits, both from that choice and from Haidar's international experience.

"Ali has really improved his perimeter game," said Luke. "His work off the dribble has also improved. He is a much more complete player."

As it happened, China won the Asian Championships, ending the Cedars' dream of Olympic glory. But Haidar hopes he can fulfill his other dream, bringing the Huskies a championship in March. He's leading a squad that a preseason media poll tapped to finish first in the GLIAC. ■

# Going the extra mile

## *Global City brings the world to Houghton*

*by Dan Schneider*

Visitors to Michigan Tech's Rozsa Center for the Performing Arts on a certain day last March may have wondered at the sight of students hauling containers of water around the lobby and up the stairs.

It was World Water Day, and Global City had instigated the water carrying as an exercise in cross-cultural understanding. The student organization aimed to raise awareness of the realities of life in the developing world. In particular . . .

1. Think about what it would be like to carry five gallons of water from the Rozsa Center to the Portage Lake Lift Bridge—a two-mile round trip—every day.

2. Now think about how you would use that water. (Hint: Probably not to flush the toilet.)

"We're just trying to think about how other people live and what their challenges are," said Erika Vye, Global City's public relations officer and a PhD student in geology.

Getting people to think is what Global City does. The group's primary instrument for fostering a global perspective is its ongoing seminar series, held every other Tuesday in Room 138 of Fisher Hall. Speakers have been students, faculty, community members, and guest lecturers, and they have addressed topics as varied as misconceptions about the people and culture of Colombia, the role of women in

## "You can be as technological as you want, but until you understand the culture in which you are working, you're not going very far."


Erika Vye, left, and Mariah Maggio


Fredline Ilorme

India's community development, and a water filtration project for a village in Ghana.

The issues reflect the diversity of Tech's student body, which is what inspired Fredline Ilorme to start Global City in fall 2007, when she was pursuing her doctorate in civil engineering.

"I'm from Haiti, so coming to Tech was the first chance that I had to meet people from so many different countries," she said. "I had learned so much from my various encounters that I thought it would be a great idea to have a formal group where everyone, Americans and internationals, could share their cultural similarities and differences and also learn more about one another."

Global City focuses on the environment, human rights, sustainability, and diversity. It puts special emphasis on the developing world in an effort to add an overlay of cultural awareness to Tech students' foundational skills in science and engineering.

"You can be as technological as you want, but until you understand the culture in which you're working, you're not going to get very far," Vye said. "And that's true whether you're in India or Indiana."

Wayne Pennington agreed. The chair of the Department of Geological and Mining Engineering and Sciences was part of the international response to the 2010 earthquake in Haiti. He presented his experiences, which reflected the importance of interaction between science and sociology.

"Our intent was—and we were successful—to have scientists and engineers and Haitian officials and sociologists and urban planners and so on all in the same room," Pennington said. As a result, information on Haiti's complex seismology was put in the hands of people directly involved in relief and reconstruction.

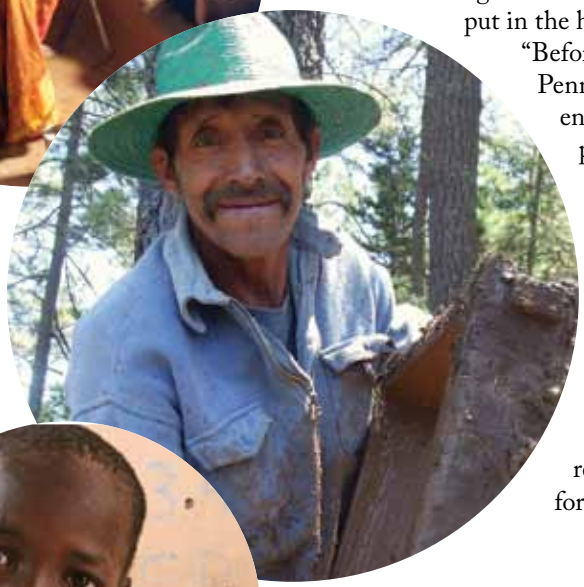
"Before this, scientists and engineers just never did that," Pennington said. "They would produce their science and their engineering reports and assume that people who need them will pick them up. There is a new generation of scientists now that realizes the importance of communicating to the public and to policy makers."

Lessons like this are transferable, said Global City president Mariah Maggio, who is pursuing an MS in Environmental Policy.

"You'll remember information like that anywhere you go," she said. "If you travel to a conference in Stockholm, or if you're in the field somewhere in Africa."

And maybe, the next time you wash your car, you'll even remember what it felt like to walk a mile carrying a bucket and forty pounds of water. ■

*Global City recently sponsored an exhibit featuring photos taken by its members during their travels. The portraits below, top to bottom, are by Erika Vye, graduate student Briana Drake, and Associate Professor Kurt Paterson. To see more, go to www.mtu.edu/magazine/globalcity.*



**Want to join Global City?** It's easy. Just "Like" the group on Facebook or email one of the group's officers to receive electronic updates on upcoming speakers and activities. Board members' contact information can be found on Global City's website, http://global.students.mtu.edu.

# 10 tips on getting into med school

*It's not all about straight As. It just might help to play in the Pep Band.*

*by Marcia Goodrich*

So you (or your kids, or your grandkids) want to be a doctor? Dr. Sarah Carlson '03 came back to Michigan Tech last spring and offered students some advice on how to be admitted to medical school.

Carlson should know. She sat on the admissions committee for the University of Michigan Medical School while she was a student there herself. She is now a surgical resident at Harvard University's BethIsrael Deaconess Medical Center, where she is training to be a pediatric surgeon.

Obviously, grades are important, Carlson says. But there's more to being a doctor than a flashy GPA. She shares some tips based on her own experiences:

*Dr. Sarah Carlson*

**1 Get some medical experience on your résumé.** Job shadowing with a physician is one way, but there are others. "I filed X-rays at Portage Hospital," she said.

**2 Get involved in research projects.** It demonstrates hands-on knowledge of science. Michigan Tech has plenty of opportunities for undergraduates to be involved in faculty research.

**3 Perform community service.** "I did volunteer work for Big Brothers, Big Sisters," Carlson said.

**4 Be ready to explain why you want to be a doctor.** Carlson's dream started when she was five years old and her sister was born with cystic fibrosis.

**5 Apply to lots of schools.** It improves your odds of acceptance; don't hang all your hopes on a single elite institution.

**6 Be polite** to everyone once you make it to the interview stage. "If you have an attitude with the secretary, your application will go into the trash."

**7 Study like crazy for the Medical College Admission Test, or MCAT.** Most applicants take a prep course, but you can also buy books and study on your own, which is what Carlson did.

**8 Learn another language.** "I speak Spanish almost every day at work," says Carlson. "It's what I use the most from my premed education."

**9 Choose a major you will excel in.** Grades aren't everything, but they count for a lot, so major in a field that comes relatively easy to you. While many choose to study biology, Carlson got her BS in Chemistry, and plenty of her MD friends majored in fields as diverse as engineering, English, music, and classics.

**10 Show you have a life.** After all, most of your patients won't spend all day studying or doing lab work. Carlson enjoys playing Rock Band on her Playstation 3 and plays in an orchestra. "It makes you stand out," she explains. "I interviewed one applicant who only got a C in biochemistry, but he wrote lots of letters to the admissions committee highlighting his other strengths. We accepted him, and he turned out to be a star." ■

# Legacy Awards

## *Passing the Tech torch*

*by Dennis Walikainen '92 '09*

***Kerstin Cleveland***

Mike Cleveland '82 swears he did not talk his daughter, Kerstin, into attending Michigan Tech. He didn't have to.

"She applied, was accepted, then said, 'Okay, I'm going to Tech.'"

Kerstin lived out of state, in Illinois, so her tuition could have been double that of in-state students. However, as the daughter of an alumnus, she was entitled to an Alumni Legacy Award, which allows the children and grandchildren of alumni to pay the Michigan resident tuition rate. Should those alumni kids or grandkids live in Michigan, they still qualify for up to $250 a year in additional financial help during their Tech career, up to $1,000.

Kerstin's mom, Marie Cleveland '82, earned a business degree, but Kerstin followed her dad into chemical engineering and is earning a second major in pharmaceutical chemistry, with the aim of working in pharmaceutical R&D after graduation.

"I enjoy the small class sizes," the sophomore says of her Michigan Tech experience. "It's not like the Big Ten schools. It's welcoming and easy to get involved."

The Legacy Award has definitely made the University more affordable, but being the daughter of alumni has an additional benefit. "It made me get involved faster, so I would have an impact on Tech, like my parents did," says Kerstin, who is a member of about half a dozen student organizations and active in intramural sports.

Like Kerstin, Ben Wittbrodt was marked for Michigan Tech early on. "He loved to build things, and he loved motors," his mother, Linda (Johnson) Wittbrodt '83 says. "We encouraged him to look elsewhere, but he'd been to Tech and loved the outdoors stuff."

Both his parents have been enthusiastic Tech supporters most of his life, so it's no surprise he would look to Houghton when choosing a university. Linda is a member of the Presidential Council of Alumnae, and she and husband Gary Wittbrodt '83 (both computer science majors; Gary also has a general engineering degree) are active in their alumni chapter.

Today, Ben is a photographer for the *Lode* as he pursues his materials science degree. He's also involved with the gymnastics club and loves all the "cool things" of the Experience Tech program.

As for the Legacy Award, "It's helped with buying textbooks, definitely."

Ben still loves to tinker and would like to continue to do so in graduate school. "I'd like to end up in the semiconductor industry, or working with solar panels or GPS devices, any of the technical, geeky toys."

Five of the Wittbrodts' friends also have children attending the University. Linda says, "When we go back to Houghton, it's like our own little reunion." And if all their offspring opt to take advantage of Legacy Awards, those reunions could get even bigger. ■

***Ben Wittbrodt***

# Proud to be a Husky

As winter begins to strengthen its icy grip on our beloved Upper Peninsula, it reminds me that it's time to buy the plane tickets to Houghton for Winter Carnival, which is right around the corner. I know I'm not the only alumnus who gets excited to see the statues, hockey games, and other activities that bring our scenic campus and the local community to life.

Reading, in this issue, about some of the amazing feats of engineering attributable to our extraordinary alumni reminds us that the value of our degrees is enhanced by the accomplishments of our fellow alumni, across many graduating classes. I am constantly amazed about the things our alumni achieve. I'm proud to be a Husky!

Another talented Husky is Ali Haidar, from Windsor, Ontario, who had the opportunity to play on the Lebanese national basketball team. You can read about Ali and his journey on page 20.

The Generations of Discovery Campaign is making significant progress, thanks to generous alumni and friends. It's encouraging to see how the cumulative impact of even the smallest of gifts is helping to strengthen Michigan Tech for future generations. There are still many opportunities to leave your imprint.

Thinking about a warmer time of year, I'm excited to look ahead to next August, when our association will host the first ever "Women of Michigan Tech" reunion, celebrating the many amazing women who have been part of the campus community and welcoming them back to Houghton with a distinctive event.

Finally, now is a great time to ask all of you to think of fellow alumni you know who are truly exceptional and nominate them for your association's board of directors, or for one of our awards. Our board is an engaged, committed, passionate group of people doing exciting things. Maybe you would make a great director? Think about it.

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

### *Join Michigan Tech's online community*

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

**huskylink.mtu.edu/join**

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

**Get connected. Get involved.**

HuskyLink

## *Alumni Events*

*December 10*
Houghton—Midyear Commencement
Minneapolis—Hockey pregame, Huskies vs. Minnesota

*December 14*
Houghton—Keweenaw Alumni Chapter Holiday Social

*December 19*
Grand Rapids—West Michigan Chapter basketball pregame, Huskies vs. Grand Valley State University

*December 29 and 30*
Detroit—Great Lakes Invitational Hockey Tournament

*January 28*
Duluth, Minnesota—Hockey pregame, Huskies vs. Duluth
Random Lake, Wisconsin—Broomball tournament

*January 29*
Grand Rapids—West Michigan Chapter brunch at Marie Catrib's

*February 8–12*
Houghton—Winter Carnival

*February 25*
Los Angeles—LA Kings alumni event

*March 3*
Colorado Springs, Colorado—Hockey pregame, Huskies vs. Colorado College

*March 20*
Howell—Tech Connect Speaker Series

*March 23 and 24*
Houghton—Jazz Weekend, "Forty-five Years of Jazz at Michigan Tech"

*April 28*
Houghton—Spring Commencement

*August 2–4*
Houghton—Alumni Reunion 2012

Events are also being planned during January and February in Arizona, Texas, and Florida. Check out our website for up-to-date listings of regional alumni events, http://mtu.edu/alumni.

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

# Alumni Reunion 2012 is going to be extra special!

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

Mark your calendars and plan to visit your alma mater for Alumni Reunion August 2–4. It's the 110th anniversary of the Michigan Tech Alumni Association, and preparations are already under way to make this the biggest reunion ever.

The featured classes will be the Golden Ms (those who graduated fifty-plus years ago) and the classes of '62, '72, '82, '87, '92 and '02. A reunion is planned for men's basketball alumni, and several fraternities and sororities will be hosting gatherings as well. There will also be special events in honor of the fiftieth anniversary of the Department of Biological Sciences.

The 2012 Reunion will be the first ever to celebrate the women of Michigan Tech. More than 15,000 female graduates, former students, faculty, and staff will be invited to events hosted by the Presidential Council of Alumnae.

Visit www.mtu.edu/reunion for details.


Whether you've already made your 2011 Annual Fund gift or plan to make your commitment in December—our students thank you.

Your gifts are vital to their Michigan Tech experience, and be assured, they are grateful.

They know they benefit daily from the Annual Fund gifts provided by our alumni and friends each year.

Through these gifts, you help the University

- educate highly qualified students
- attract substantial research funding
- recruit some the nation's top faculty
- provide first-class facilities and innovative programs

If you want to ensure your Annual Fund support is received before 2011 comes to a close, just

- go online to www.mtu.edu/giving/ and make a credit card gift, or
- phone the Michigan Tech Fund at 906-487-2310 or 877-386-3688 (toll-free) and use your credit card to make a gift over the phone.

Again, thank you for your gift in support of Michigan Tech and our students.

The Michigan Tech Annual Fund

*Give every year. Make a difference every day*

# Copper Country Snowfall Contest is back!

Predict the total amount of snow to fall in the Keweenaw this winter and win a stay at the Keweenaw Mountain Lodge and a Michigan Tech Winter Survival Kit!

Last winter, over a thousand alumni and friends responded to our challenge with guesses ranging from a low of 100 inches to a high of 385. Ron Streib, a 1969 metallurgical engineering alumnus, came the closest with his prediction of 178.3 inches; the Keweenaw Research Center recorded a total of 178.5 inches for the season.

Ron and his wife, Shirley, stopped by the Alumni House this fall to let us know how much they enjoyed their stay at the Keweenaw Mountain Lodge and their Michigan Tech winter gear.

Don't wait! Enter your snowfall prediction for the 2011–12 season at http://apps.alumni.mtu.edu/snow.

## Get involved! Serve on the Alumni Association Board of Directors

The Michigan Tech Alumni Association is calling for nominations for exceptional individuals to serve on its Board of Directors.

As the policy-making body for the Michigan Tech Alumni Association, the Board of Directors establishes programs, sets priorities for the Alumni Association, and works with the director of alumni relations to engage alumni with the University.

The deadline for nominations is December 31. More information about the responsibilities and expectations of Alumni Association board members as well as the nomination form can be found at www.mtu.edu/alumni/notables/board/about or by contacting the Office of Alumni Relations at alumni@mtu.edu or toll free at 877-688-2586.

## Stay Connected

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

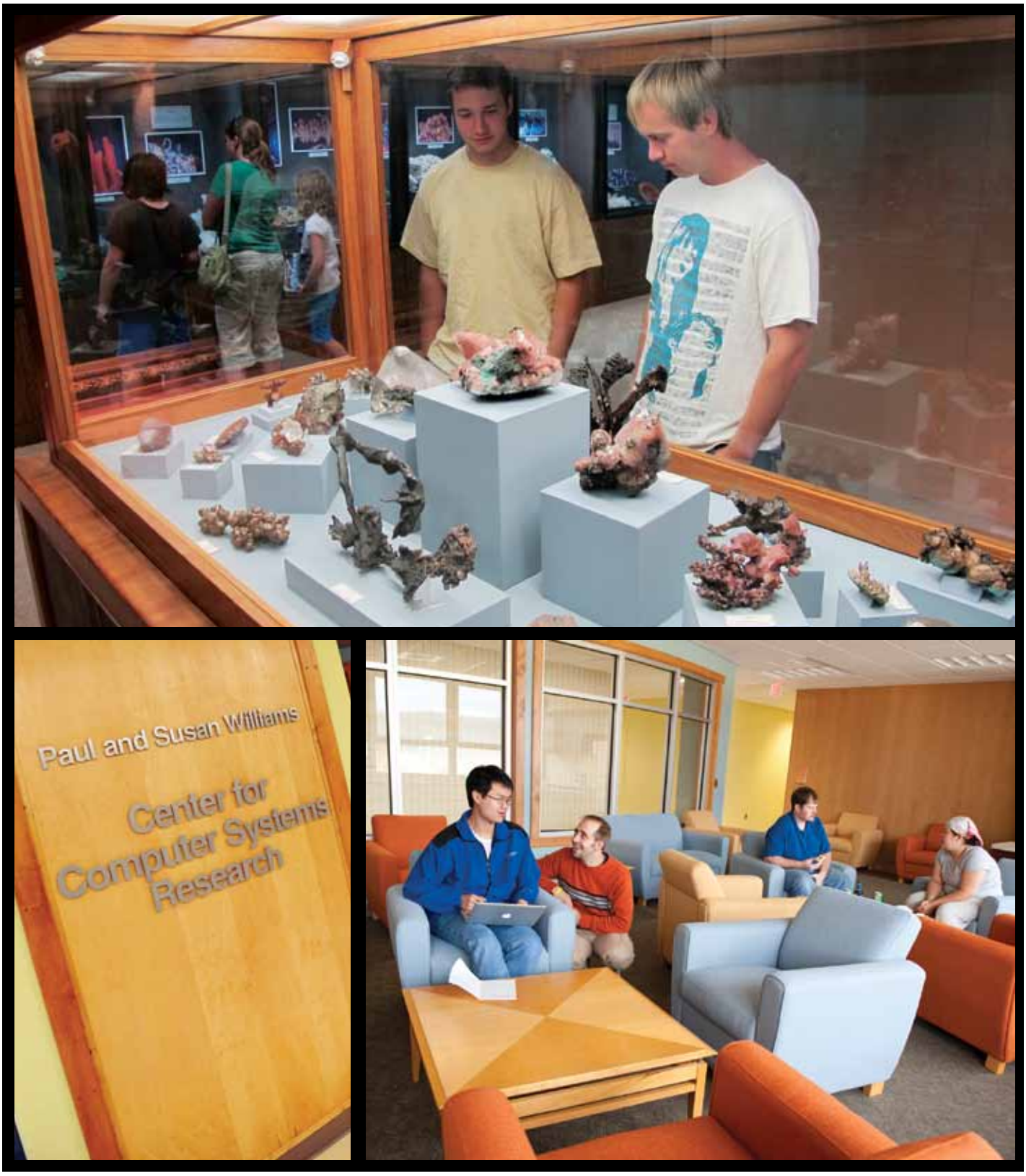
You can do this in two ways:

Update your profile within Husky-Link or complete the form at www.alumni.mtu.edu/update.

Contact the Alumni Relations office at 906-487-2400, toll free at 1-877-MTU-ALUM, or email alumni@mtu.edu.

Thanks for staying in touch!

Michigan Tech Alumni Association




## New computing center, new digs for the Seaman Museum

***The Seaman Mineral Museum, long cached on the fifth floor of the Electrical Energy Resources Center, has moved to modern, new quarters on Sharon Avenue. The world-class collections are even easier to view, thanks to convenient parking. The former museum space is now the home of the Paul and Susan Williams Center for Computing Systems Research. Its 10,000 square feet of labs, offices, and common areas are open to students and faculty in the departments of electrical and computing engineering and of computer science, and to others with an interest in computing. The new museum and the Williams Center were both funded entirely through alumni contributions.***

# Class notes

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

## 1940s

**Richard Alkema** '49 announces that his grandson Dustin and Dustin's wife, Suzanne, had Richard's eighth great-grandson in July 2011.

## 1950s

**Raymond Thomas** '52 recalls living in the Delta Sig, Beta Pi fraternity house from 1950 through 1952. "Sat on that front porch many times, bussed dishes in the basement dining room. Many parties. I had many memorable times with my frat brothers and good times at Tech, and I'm still around to appreciate it."

## 1960s

**Robert Farsky's** '65 first novel, *This Way Madness Comes,* written under the pen name Robert Alan, was selected by the 2011 National Indie Excellence Awards as winner in the fiction/adventure category and was also selected by the 2011 International Book Awards as winner in the best new fiction category.

**Virgil Sabin** '68 (EME) retired after forty-three years of industry and private consulting in energy conversion technologies. He and his wife, Cindy, are now in central Virginia on their black Angus cattle farm and are enjoying retirement.

## 1970s

**Christopher Lenicheck** '70 is the volunteer manager and head coach of the American Legion Post 74, Charlottesville, Virginia, Junior Shooting Sports Air Rifle Team, which was formed in 2010.

**Richard Newell** '70 says, "Twice a week I wear my Tech jerseys to let folks know who I really am." On July 4, he celebrated by bicycling twenty miles in his '08 jersey.

**Robert Harrington** '73 is now district secretary for District 30 Toastmaster International, with Advanced Communicator Silver and Advanced Leader Bronze. "I still remember debating against the Vietnam War in 1968 and painting the football field with white crosses and 'Paris is their only Hope' at the start of the Paris Peace Talks as our prayer for the ROTC cadets."

**Frederick Jenness** '75 of Golden Valley, Minnesota, has retired from the Minnesota Pollution Control Agency. Prior to retirement Fred was named Minnesota Governmental Engineer of the Year. He received degrees from Michigan Tech in civil and environmental engineering and in engineering administration and a degree from Alfred State College in construction management. During his career, he worked for O'Brien & Gere Engineers in Syracuse, New York, the United States Navy Seabees, and the State of Minnesota. Fred is currently the commander of the Veterans of Foreign Wars post in Dresser, Wisconsin. He and his wife, Jeanne Mohler, MD, have four children, Andrea, Caitlin, Chris, and Jon, and three grandchildren, Ella, Breonna, and Brenden.


### Photographer Norton authors new book on the Serengeti

Writer-photographer Boyd Norton '60 has authored a new book, *Serengeti, the Eternal Beginning,* published by Fulcrum Books.

In its 263 pages, Norton shares photographs and experiences from his twenty-six trips to Africa's Serengeti Plain, from cheetahs stalking a gazelle to men with AK-47s guarding rhinos from poachers.

Author Joe McGinniss says of *Serengeti, the Eternal Beginning,* "Visually stunning, evocatively written, Norton's *Serengeti* brings us back to our common birthplace and makes a compelling argument for the need to protect and preserve it."

Norton has been a wildlife photographer and writer for more than forty-five years and in 2010 was named one of the "Forty Most Influential Outdoor Photographers" by *Outdoor Photography Magazine.*

## Noel receives national aviation award

Mark Noel '77, a manager with the Michigan Department of Transportation's (MDOT) Office of Aeronautics, has received the 2011 National Association of State Aviation Officials Distinguished Service Award. The award is the highest recognition that can be presented to state aviation agency employees for excellence. This is the first time the award has honored a Michigan resident.

"We are very fortunate to have dedicated employees like Mark working for the state of Michigan," said Mike Trout, executive administrator for the Office of Aeronautics. "This is certainly well deserved."

Noel was commended for effectively managing the Federal Aviation Administration's State Block Grant Program and reengineering the Statewide Pavement Management Program and the airport user survey process. He is considered by his peers to be an innovative manager whose process changes have increased efficiencies, improved customer service, and reduced costs.

Noel has worked for MDOT for thirty-four years, twenty-three of those with Aeronautics. He is currently the manager of Aeronautics' Project Development section and holds a BS in Civil Engineering from Michigan Tech.

## Shoop receives Lifetime Achievement Award

Sally Shoop '79 '91 has received a Lifetime Achievement Award from the Cold Regions Research and Engineering Laboratory (CRREL), in New Hampshire, "for a career of demonstrated successes and outstanding contributions in geotechnical engineering."

Shoop is acting technical director of terrestrial and geospatial sciences for CRREL, a US Army Research and Development Center. Her primary research focuses on how seasonal changes affect vehicle mobility, and she has worked with Michigan Tech's Keweenaw Research Center on related studies. Recently, she collaborated in Antarctica with Russ Alger, director of Michigan Tech's Institute of Snow Research, on the SnowPaver, which makes roads and runways on snow.

She is president of the International Society for Terrain-Vehicle Systems and the former editor of the *Journal of Terramechanics* and has received numerous awards and commendations in connection with her achievements at CRREL.

From Michigan Tech, Shoop earned a BS in Geological Engineering and a PhD in Civil Engineering. She received an MS in Geological Engineering from the University of Arizona.

## 1980s

**Fred Sansom** '80 says, "Well, I am a little behind schedule on my midlife crisis (Isn't that supposed to happen in your forties?). After spending the last fourteen years in the Midwest working in the batch chemical industry, I have taken a job running a co-gen facility on the edge of the Mojave Desert. I have been at it four weeks and love it. Who knew how beautiful the desert could be? So my first week in this company of 1,000 people in a small town in the California desert and I meet another Tech grad. Go figure!"

**Sally (Pearson) Heidtke** '81 (Chemical Engineering) is the new director of operational development for CCI Systems of Iron Mountain. She and her husband, Dean, live in Breitung Township.

**Cindy Richardson Unangst** '83 (Forestry) received her AICP certification in August after taking the Comprehensive Planning Exam in May. She is the staff planner and zoning administrator for Middletown, Maryland. "I'm enjoying life in Frederick County, Maryland, but miss the wonderful fall colors in the UP," she says.

**Thomas George** '85 has been named the director of surface transportation for the Niagara Frontier Transportation Authority, responsible for all bus and rail public transit services for western New York.

**Michael Pretti** '85 is now senior engineer in the Green Bay, Wisconsin, office of Conestoga-Rovers & Associates in the Agricultural Engineering Group.

Sayuri and **Scott Tarvainen** '86 announce the birth of their daughter, Kaarina Norika, on February 17. "I also changed companies in May and now work for BAE Systems," says Scott. "We continue to live in Shin-Yokohama, Japan."

## 1990s

Jenny and **Christopher Felhauer** '96 announce the birth of Chloe Vannee on June 30.

**Steven Cinelli** '98 is pursuing a Master of Science in Petroleum Engineering at the University of Alaska Fairbanks and anticipates graduating in December 2011.

**Ben** '98 and **Laura (Arlt) Gerold** '00 are proud to announce the October 15, 2010, birth of their third child, Penelope Rose. Penelope joins big brothers Kile and Daniel.

## 2000s

**Genae** '01 and **Tim Meerstein** '00 announce the birth of John William on June 8, 2011. "His big brother, Marcus, was very excited, too," said Genae.

**Jessica Elwell** '02 announces the birth of their first daughter, Kailyn Jae, on June 20. "Big brother Alton (born September 30, 2009) is so proud!"

**Benjamin Almquist** '04 MSE accepted a postdoctoral scholar position at MIT and is developing new biomaterials for chronic wound healing applications.

Audrey and **James Goetzinger** '04 announce the birth of their second child, Martin Joseph, born May 26.

Beth and **Jeffrey Rudd** '04 welcomed Jonathan Dennis into the world August 12.

**Matthew McCormick** '05 and **Cindy Ruotsi** '07 were married August 13, after six years of dating.

**Jennifer Heglund** '06 married Nicholas Fleming on June 4 at the Keweenaw Mountain Lodge in Copper Harbor. They reside in Hermantown, Minnesota.

Dan and **Katie (Price) Sterk** '07 welcomed their first child, Walter, on October 23, 2010.

Ryan and **Ashley (Blomberg) Ploetz** '08 welcomed a son, Maximus William, on January 27.

**Robert** '09 and **Melissa (Socks) Hambrock** '09 were married on May 21 in De Pere, Wisconsin.

## 2010s

**Brandon Maurisak** '10 has been appointed by the Duluth City Council to a three-year term on the Board of Directors of the Duluth Transit Authority.

# Letters to the editor

### Science on the opinion page

In this article, a sidebar mentions that Rachel Carson ". . . laid the cornerstone of the environmental movement . . ." and that her work was "vindicated."

Her stand on DDT is not admired, nor agreed to, by many scientists. Some feel that DDT saved the lives of millions of people from malaria prior to its near-total ban. The fear now is that millions of avoidable deaths occur as a result. Many of her claims are in dispute to this day. For a discussion of the other side of Rachel Carson, check out www.21stcenturysciencetech.com/articles/summ02/Carson.html.

The nuclear winter that Carl Sagan worried about has fortunately been avoided so far. It seems likely that more people would have died in a wholesale nuclear exchange than from the consequences of a hypothetical nuclear winter.

The authors of this article might have chosen some more credible examples of scientists who spoke out.

*Edmund K. Miller '57*

On page 7 in the fall 2011 issue of your otherwise fine *Michigan Tech Magazine* there is a blurb about Rachel Carson, stating her work was "vindicated."

In his 2005 book *Hoodwinked: How Intellectual Hucksters Have Hijacked American Culture,* author Jack Cashill makes the case against Carson. In particular, Cashill tells the story of J. Gordon Edwards, who was an environmentalist, park ranger, esteemed entomologist, and legendary mountain climber, who found *Silent Spring* to be full of "deceptions, false statements, horrible innuendoes, and ridiculous allegations." Edwards cited the 500 million lives saved that the National Academy of Sciences attributed to DDT, and he echoed the World Health Organization's affirmation that no substance had ever proved more beneficial to man.

The former chairman of the Department of Economics at George Mason University and Professor Emeritus Walter Williams blames the premature deaths of millions of people in Africa on this banning of DDT, which is due in part to Rachel Carson and her adherents. Some vindication!

*Arnell L. Engstrom '56*

I attended Sault Tech for two years and began to attend Tech at Houghton but was interrupted by the Korean War and never returned. But I have always been proud of Tech and its mission.

I received the fall 2011 issue, which was very well done. However, you have included Rachel Carson on the same page with Albert Einstein and Carl Sagan.

Good grief! If you wish to say something nice about Rachel, do it in some other context. She may have saved some birds, but . . .

If you had stopped to consider the cost in human lives her book and the subsequent hysteria caused, you might have chosen someone more deserving. Surely you must have heard the reports that DDT has been largely exonerated, and in the intervening years since the ban, according to what I have read, malaria has caused millions of lives to be lost, especially in Africa and Asia.

*Frank Hart '52*

### Correction

We misidentified the photographer who took the photo of Norman Augustine on page 10 of the fall *Michigan Tech Magazine*. The credit goes to Mariusz Nowak.

### Clarification

Aviators Mario and Joseph Fontana, who were mentioned in "Look! Up in the Sky!" were indeed brothers. Thanks to their niece, Martha Fontana Worth, for providing the information.

# In memoriam

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

**1934**
Stanley L. Urbanek

**1937**
Catherine P. (Toscana) Rompf

**1938**
George W. Mattson
Col. Henry P. Smolich (Ret.)

**1940**
Sulo W. Wiitala

**1942**
Floyd D. Bergvall
Paul E. Hainault

**1943**
Silas M. Evans
Lloyd E. Liljequist
Patrick K. Thornton

**1945**
Erwin R. Ray

**1948**
Harold C. Boback
Alice C. (Coon) Crowell
William K. McKie, PE

**1949**
George A. Evans Jr.
Mary E. (Richards) Gregorich
Eugene E. Johnson
Robert R. Kust
Elwin V. See

**1950**
John M. Amo
Melvin L. Bock
Russell W. Karry
Thomas R. Secor
Louis C. Tabor
Ray L. Wilson

**1952**
Robert E. Birtz
Malcolm H. Franz

**1953**
Gale H. Vorce

**1954**
Lt. Col. Kaye D. Jackson (Ret.)
Earl W. Maki
David J. Rajala

**1955**
Glen A. Hultquist

**1956**
Jean-Louis J. Barbe
Robert Henry Bean
Ralph A. Wallin

**1957**
Edward D. Bensal
Dr. Donald L. Bullock
Theodore O. LaJeunesse
Lembit Palm-Leis

**1958**
J. Terry Moore

**1959**
Donald A. Denton
Richard J. Noyes

**1961**
Reiner Denison
Wayne E. Weingarten

**1962**
Genevieve E. M. (Musich) Seaton
Raymond T. Sunie

**1963**
Gary N. Huffman

**1967**
Giles B. Slattery

**1968**
Richard L. Dick

**1969**
James J. Nosratian

**1970**
Bernard F. Marketty

**1972**
Russell A. Wagner

**1973**
Thomas R. Kivela

**1976**
Dan E. Ryon

**1977**
Peter M. Koski
Arthur M. Moretta

**1978**
Michael J. Rush

**1979**
Michael A. Fricke

**1980**
Marc G. Chambers
William R. Norquay

**1982**
Dennis C. Erickson

**1988**
Roger W. Evans
Jenal C. (Johnson) Larson


## The fine print

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**Class notes**

Class notes are derived from your submissions to HuskyLink, mtu.edu/alumni/connect/huskylink. You may also submit your class notes to techfund@mtu.edu.

*When renowned composer Eric Whitacre conducted hundreds of Tech and high school musicians before a packed house at the Rozsa Center, the crowd gave a standing ovation to Jane Laird '68, whose gift made the unforgettable evening possible.*

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Michigan Tech

*Jane Laird was the second woman in Michigan Tech history to earn a bachelor's degree in electrical engineering and the first to graduate in the power option. Jane loved her experience at Tech and feels fortunate to be able to "pay back" for an education that played such a significant role in her successful career in Ford Motor Company's Powertrain Engineering Division. She says, "I would not be where I am without Michigan Tech."*

*Soon after graduating in 1968, Jane began giving back to Michigan Tech, of both her talents and her resources. At first she gave cash but then realized the wisdom of giving appreciated stock. "I not only avoid capital gains tax but also laborious tax computations on stocks that went through many splits and stock dividends."*

*While serving as a Michigan Tech Fund trustee, Jane decided to include Tech in her estate plans, becoming a charter member of the McNair Society. She also is a charter member of the Presidential Council of Alumnae.*

*Jane directs her support primarily to her endowed scholarship and campus cultural enrichment programs.*

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