

Tech Topics

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Mroz Named Interim Dean of Forestry

Professor **Glenn Mroz** has been named interim dean of the School of Forestry and Wood Products, effective March 10.

Mroz, who was associate dean of the School, replaces Dean **Ed Frayer**, who resigned as dean on March 9.

"Ed served as dean for sixteen years and did some marvelous things while he was here," Mroz said. "He hired good people and then he cleared the way for them to do what they did best."

Under Frayer's leadership, research activity in the School expanded exponentially to a position of prominence at Michigan Tech. Enrollment in undergraduate programs doubled, while graduate enrollment tripled and a PhD program was instituted. He worked closely with Advancement and President **Curt Tompkins** to raise \$2.5 million in private funds to construct the new, \$10-million addition to the forestry building.

Mroz joined the School of Forestry and Wood Products faculty in 1976 as an assistant professor. Before his appointment as associate dean, he was coordinator of the School's Forest Ecology and Management Program.

Mroz has been an investigator on approximately \$6.5 million in sponsored research. Among his more well-known projects was the ELF environmental monitoring program, which evaluated the effects on nearby vegetation of extremely low frequency radio waves generated by the US Navy's communications grid. Recently, he was a co-investigator on the Gribben buried-forest project, studying a 10,000-year-old forest buried in sand and water at the end of the last ice age. He has authored or coauthored approximately seventy-five publications.

Mroz has served on the University Senate and chairs Michigan Tech's Institutional Animal Care and Use Committee. He has been involved in a variety of international service projects in Poland and the Baltic states and is a consultant for both private industry and public agencies, including the

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In the last analysis, it is our conception of death which decides our answers to the questions life puts to us.

—DAG HAMMERSKJOLD

Seel: Better Communication a Top Priority

Improving communication between top administrators, particularly the president, and the rest of the University community would be a key priority if he were chosen as provost, **Max Seel** told a sparse audience April 4.

"It's a complicated position," said Seel, the dean of sciences and arts. "The provost has to align the University community with the president, and there will be push and pull on both sides."

"Communication between the president, the provost, and the vice presidents is essential," he said. "We need to speak with a unified voice." That doesn't mean that differences of opinion won't occur. "But at some point, we have to have a unified vision of the University. It's ridiculous to have in the *Lode* that [Board of Control Chair] **Jim Mitchell** says this and [former provost] **Fred Dobney** says that. It's bad for the University community."

On shared governance, Seel said he generally preferred to have decisions made at the lowest possible level by those affected the most. **Robert Johnson**, chair of the Department of Humanities, described Seel's management style. "Before a hard and fast decision is made, you bring in the chairs and say let's talk," he said. "Discussion before action is at the heart of participatory governance."

Presidential Professor **John Crittenden** (Civil and Environmental Engineering) asked for Seel's opinion on whether semesters should be fourteen or fifteen weeks long, a reference to last year's campus-wide debate on the issue. Seel said he felt some of the controversy could have been avoided if the senate's role in the decision-making process had been made clearer in the beginning. And he said that either the provost or the president should be in attendance at senate meetings to speak for the administration.

As for the academic calendar, Seel said he believed it is "in flux," particularly since so many curriculum changes are in progress. He congratulated faculty and staff for their work in making an orderly transition from quarters to semesters. He expressed cautious support for a fourteen-week calendar, saying it may enhance faculty research, which in turn will result in better undergraduate education.

"If we want to make the last step to be a nationally known university, we need to grow research and scholarship," he said. And a good climate for research is necessary to attract top faculty, which are the backbone of a quality undergraduate program, he said.

Crittenden asked Seel to comment on the causes and possible prevention of last year's financial difficulties. Seel said that he was only familiar with his own budget, but offered that the University should try to anticipate problems. "If we need \$500,000 to open a building, so be it," he said. "But we should plan for it. In the long run, we need the new buildings, but it doesn't excuse us from planning" for their operation costs.

Crittenden suggested that more money should be spent on program development and less on buildings. Seel agreed that program development was important. However, he said, both the library and Fisher Hall are inadequate and in need of an overhaul.

"Too often, having more undergraduates is presented as a solution" to MTU's financial problems, he said. Because faculty, particularly in engineering, are involved in much more research and scholarship than in the past, they cannot teach the same number of undergraduates they did fifteen years ago, when MTU was devoted primarily to undergraduate engineering education. Even then, the University plan called for lowering engineering enrollment, expanding the graduate program, and increasing the number of undergraduates in undersubscribed areas. "But we had a 100-year reputation as a good engineering school," he said, so expecting students to flock here to study in other areas was unrealistic.

As to why he was interested in the provost's position, Seel cited his love for MTU and the local area. "If I stay dean, and then I don't like the new provost and decide to leave, I'll kick myself," he said. He indicated that his experience may give him insights necessary to succeed as provost. "I've been dean for ten years," he said. "Maybe I can make it work."

Upcoming Provost-Candidate Forums

- Thomas Hanley, dean of engineering at the University of Louisville: Thurs., April 13, 7:00–9:00 p.m., M&M U115; Fri., April 14, 2:30–3:45 p.m., MUB Ballroom A
- W. Kent Wray, dean of engineering at Ohio University: Mon., April 24, 7:00–9:00 p.m., MUB Ballroom A; Tues., April 25, 2:30–3:45 p.m., M&M U115
- Gregory Campbell, dean of engineering at Clarksons University: Thurs., April 27, 7:00–9:00 p.m., M&M U115; Fri., April 28, 2:30–3:45 p.m., M&M U115 (tentative)

Seely to Take NSF Post

Bruce Seely, professor of social sciences and president of the University Senate, is taking a sabbatical next year from Michigan Tech to serve as program director for science and technology studies (STS) at the National Science Foundation.

Located in NSF's Directorate of Social, Behavioral, and Economic Sciences, "this is a relatively small program by most standards," Seely said. With an annual budget of about \$3.5 million, STS supports work in the history of technology, the history of science, and philosophy of science and technology, and the social studies of science and technology. "The grants can involve dissertation research, travel to collections, visiting other institutions, etc.," Seely said. "No other agency supports work like this. It will be an interesting opportunity."

The program director awards grants based on the recommendations of a panel and several independent experts. "It's an interesting opportunity," he said. "I'll be able to interact with others in my field in a new way. I'm the first historian of technology to have had the position, and it will involve traveling to academic meetings and talking to scholars."

Seely's is a one-year appointment, with the opportunity for a one-year renewal. And it will give him the opportunity to find out if it truly is better to give than to receive. In the past, Seely has been awarded support for his dissertation and two subsequent projects

Parent Network Forming

The EAP is piloting a local parent network. The goal of parent networks is to increase communication between parents, children, and their schools; establish standards of conduct, including role modeling by adults; educate parents and share parenting strategies; and improve the environment for children. All interested persons are invited to learn about the parent network on Wednesday, April 12, at noon in the Memorial Union Alumni Lounge.

MichiganTech

Bill Curnow, executive director, University Relations
Marcia Goodrich, *Tech Topics* editor

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- By e-mail to ttopics@mtu.edu
- By campus mail, send typed copies to *Tech Topics*, University Relations.

Each week, the deadline for submitting information is **Friday at 5:00 p.m.** for publication the following Friday.

Quality Lecturing v. Quality Learning

Center for Teaching, Learning, and Faculty Development
By William Kennedy, director



Teaching at
Tech

There seems to be a growing divide in undergraduate educational circles. The traditional side sees professors as repositories, gatherers, packagers, and distributors of knowledge. By this view, an instructor's central instructional responsibility is to lecture to students in a well-organized, enthusiastic, thought-provoking, stimulating, masterful, and highly understandable manner. The problem with this most-hopeful rendering of the lecturer's task is that it is being increasingly acknowledged that many students won't or can't learn very much by simply listening to lectures and taking notes. Critics of the lecture method suggest that much of what students are able to produce in response to lectures on a test as evidence of learning is superficial and forgotten soon after the test is over.

Critics suggest that some of the widespread complaints concerning student apathy and lack of intellectual engagement can be attributed to the predominance of the lecture. Some students complain that lecture courses turn the education experience into time-consuming and frustrating scavenger hunts in which they are to divine which of the unappetizing amalgamation of data bits in the incoming stream of instruction are likely to be on the test. Scoop files, blatant and frequent plagiarism, growing incivility, poor attendance, and in-class apathy are all symptomatic of a growing mismatch between student and instructor expectations. Professors want to lecture to a budding young crop of wanna-be professors, and credential-seeking, course-of-least-resistance students want professors to resort to a "just tell me what's gonna be on the test" approach to teaching. The bottom line to all of this is that the lec-

ture mode, as gratifying and comfortable as it might be for the average professor, is no longer accomplishing the desired end (learning) for the average college student.

On the other side of this great divide are those who argue that to rescue residential undergraduate education from the scrap-yard of dying industries, instructors must adopt a no-holds-barred approach to identifying instructional strategies that will engage more of our students. Adopting such strategies, they argue, is our only real chance of encouraging the kind of deep and durable learning that will serve students well when their credentialing exercise ends and their life-long learning in the "real world" begins. Allowing large numbers of students to remain disenchanted with the instructional component of their residential college experience just won't do and plays into the hands of the corporations gearing up to deliver cyber-fac-toid learning over the Web.

One alternative for radically overhauling undergraduate instruction is the constructivist approach. Springing from the philosophy of Vico and Kant and further elaborated by Piaget, constructivists do not see education as primarily the transfer of knowledge from the teacher to the student. Rather, they see education as providing students with opportunities to reconsider the mental models that they bring along with them by developing organized clusters of problems built around disciplinary concepts. These problems would be developed so as to challenge, and thus engage, their existing mental models. These clusters of problems are intentionally student-centered and encourage students to ask questions, do their own experiments, make their own analogies, and come to their own conclusions.

Next week, we'll look at what goes on in a typical constructivist's classroom.

MTU Snowmobile Team Takes Two "King/Queen of the Hill Awards"

As the only SAE Clean Snowmobile Challenge 2000 sled to make it to the top of the steepest ski run at Snow King Resort in Wyoming, Michigan Tech won Best Performance honors in the Challenge 2000 plus an award from the World Championship Hill Climb.

The Jackson Hole Snow Devils, organizers of the World Championship Hill Climb, created a special class at their event for SAE Clean Snowmobile 2000 participants. For winning the event, MTU received \$2,000 in prize money from Teton County and the prestigious belt buckle the Snow Devils reserve for hill-climb champions. Competitors from all over the US come to the World Championship Hill Climb to vie for the titles of King/Queen of the Hill.

Michigan Tech's was the only Clean Snowmobile Challenge sled to make it to the top of the hill (it took just over a minute) and also had the most points overall in the challenge's three performance events: handling, acceleration, and the hill climb. The State University of New York at Buffalo won first place overall in the Clean Snowmobile Challenge, placing first in categories such as fuel economy and emissions.

Teams from seven colleges and universities competed in the event, which was held March 29-31 in Jackson, Wyoming. MTU placed fourth overall.

How Internet2 Can Help

Many-Body Perturbation, Massive Math, and Computers of the Future

(Editor's note: For more information on Internet2 Day, April 18 at MTU, see <http://www.i2.mtu.edu/i2day/>)

Warren Perger is running into the same brick wall that scientists dating back to the time of Isaac Newton did, but he hopes Internet2 will help him climb it.

Perger, an associate professor in the Department of Electrical and Computer Engineering, calculates the orbits of electrons around atomic nuclei in the same way that Newton, Kepler, and other giants of classical mechanics tried to figure out the orbits of the planets around the sun. (Why this is extremely important and not just the mind-numbing fixation of an obsessed academic will be explained later.)

Here's the problem: It's easy to calculate the orbit of a single planet/electron around a massive sun/nucleus. But when you have more than one electron, and atoms are notorious for this, they warp each other's orbits to the point that it's literally impossible to describe them perfectly.

However, you can get a pretty close estimate by using a tool developed a couple of centuries ago called many-body perturbation theory. First, Perger calculates the orbit of an electron, pretending that there are no other electrons whizzing around and perturbing it. Then he figures the orbit of a second electron, also pretending that it's orbiting all by itself. And then he estimates the orbits of all the other companion electrons in the same way. Scientists call this "calculating to the zeroth order." It's easy by mathematician's standards, and is typically about 90 percent accurate.

Next, now that you sort of know what the second electron is up to, you can estimate how it will warp the orbit of the first electron, so you get a better description of the first one's real orbit. True, you're working with estimated orbits, so the answer won't be quite right, but it will be righter than before. The math is harder at this point, called the first order, but nowhere near the point of calculating overload.

Theoretically, you can keep this process up indefinitely, at each level figuring the orbits of all the electrons a little more accurately (though you can never be exactly right). Perger has developed a computer program that makes the whole process possible. But realistically, he says, the math gets so long and complicated at the third order that computers can barely handle it. And nobody has done any complete fourth-order calculations.

To truly solve the many-body problem, Perger needs power on a vast scale. And he thinks Internet2 will provide it.

"I hope that we'll be able to tap into processors on and off campus, and have Michigan Tech coordinate the whole thing

like a conductor leading an orchestra," he said. His goal, and the goal of his co-investigators at other institutions, including the Ohio Supercomputer Center and the University of Texas Pan-Am, is to harness their computers so they can perform these massive calculations in something less than a few lifetimes.

Now for why this is important.

"Today, in the twenty-first century, we are working on problems that are atomic in scale more than we ever did," Perger said. That's because more and more transistors are being crammed into smaller and smaller spaces to handle the skyrocketing demands of new applications such as the Internet. For example, the millions of transistors in the latest Pentium chip are on the scale of microns, or one ten-thousandth of an inch. But unless newer, tinier, and more-efficient systems are developed, they won't be able to keep up with demand and processing will slow to a crawl.

Even a cubic micron has millions of atoms in it, so how an individual atom behaves in a Pentium chip is still pretty meaningless. That's probably going to change as things get littler. "Now we're starting to look at nanoscale transistors," Perger said. "That's 10^{-9} cubed, a much smaller volume, maybe a few hundred atoms."

At that scale, individual atoms can appear "bumpy," which has serious implications for the behavior of the transistors. And the orbits of electrons can make them very bumpy indeed.

Perger's research on electron orbits has been concentrating on the alkalis, elements in the first column of the periodic table, such as lithium and sodium. He's far more interested in elements buried inside the table, such as silicon, but the orbits of their electrons are much trickier to compute than the simpler alkalis.

These are the elements that have the most potential for building the next generation of nanoscale computers, and it will be absolutely critical to understand their quantum mechanics if these computers are going to work. "My goal is to help guide the next generation of devices by being able to say with precision which elements would be best for quantum gates [the on-off switches that stand for zero or one, upon which all computing is based]," he said.

"It's all part of a huge picture, and my part is just one teeny slice," he said.

Ironically, when Perger started working on the many-body problem, he knew he didn't have the tools to succeed. Back in the mid-1980s, computers weren't anywhere near powerful enough to do the calculations. But

he figured that Moore's Law, which predicts that computing power will double every two years ad infinitum, would eventually provide what he needed. It turns out he was right. And it also turns out that his work may help the computing industry live up to Moore's dictates in the coming decades.

Which is all very well and good, but it seems that Perger, for all the practical ramifications of his research, remains at heart a monomaniacal academic. "I've devoted fifteen years of my life to this," he says happily. "When I go to bed at night, I'm still thinking about the many-body problem."

Food, Glorious Food at Tech Tea Time

In conjunction with Tech Arts Festival, Tech Tea Time on Wednesday, April 12, will host a special program on food, the theme of this year's festival. Madeline Voelker, Hispanic/Latino coordinator, will talk about the food of her native Puerto Rico, and she'll introduce some students from south of the border, who will demonstrate how to make a tortilla and other simple dishes if there is time. In addition, instead of the usual Tea Time cookies, some simple ethnic fingerfoods will be served. Tech Tea Time is at 4:00 p.m. in the MTU Memorial Union Alumni Lounge, and admission is free.

There is a strong Spanish influence in the cuisine of Puerto Rico and many countries south of the border. However, unlike Mexico, "the food of Puerto Rico is not very spicy," Voelker says. Rice is a staple of the diet and is often accompanied by beans. She says she loves to cook with plantains, a vegetable that is a member of the banana family and common in tropical countries. They can occasionally be found in the produce sections of local supermarkets, but, says Voelker, "They are seldom fresh." In fact, a variety of fresh vegetables, fruit and seafood is what she misses most.

This Tea Time is an excellent opportunity to discuss not only food, but the role it plays in the culture of different countries. It is presented by the Memorial Union Board Tech Arts Festival Committee and is coordinated by University Cultural Enrichment. Call 487-2844 for further information.

In Print

Assistant Professor Ulrich Hansmann (Physics) coauthored with Nelson Alves (Sao Paulo, Brazil) an article, "Partition Function Zeros and Finite Size Scaling of Helix-Coil Transitions in a Polypeptide," which appeared in *Physical Review Letters*, Vol. 84 (February 2000).

Men in Tights and Tutus?

It's Tutu Much Fun!

Submitted by University Cultural Enrichment

Men in tights and tutus? Yes! It's the internationally renowned Ballets Trockadero de Monte Carlo pirouetting back into town on Friday, April 14, at 8:00 p.m. at the Calumet Theatre. With high kicks and high jinks, this all-male troupe spoofs all that is held sacred (by some, anyway) in classical ballet.

Unless you've seen them before, you've never seen stuff strutted quite like this. With hairy chests rising above frilly tutus and pointe shoes, they adjust their tiaras, bat their mile-long eyelashes, pout their luscious lips, and dance up a storm.

But for all their slapstick, teetering pirouettes, early and late entrances, on-stage collisions, falling wigs, and molting feathers, these guys can really dance, and quite often end up in the right place at the right time. They are, after all, trained dancers who know the ballets well, and who know ballet culture. Although they are true to the choreography and technique of classical Russian ballet, they see all the possibilities for satire and parody, and they know how to time the jokes to break up the musical flow. They make fun of the ridiculous plot lines and exaggerate the stylized gestures in their classic, truly terminal *Dying Swan*, who molts copiously in her death throes, to make it the funniest three minutes of ballet on record.

They work as any conventional ballet company works: with ballet mistress, daily class, and rehearsals. There is one major difference. They can't buy their giant size-eleven toe shoes off the shelf; they are custom made, and they travel with caseloads of them. Numerous tours have established the Trocks as a major dance phenomenon throughout the world. They have survived as a company for twenty-six years largely due to their genuine talent as dancers and physical comedians, and their intelligent and affectionate send-up of the traditional conventions of ballet. For tickets, call the Performing Arts Ticket Center at 487-3200 (Tuesday-Saturday, 11:00 a.m.-7:00 p.m.), stop by the Memorial Union Box Office (Monday-Friday, 11:00 a.m.-3:00 p.m.) or the SDC Central Ticket Office (Monday-Friday, 8:30 a.m.-6:00 p.m.), or the Calumet Theatre (337-2610, Tuesday-Saturday, 11:00 a.m.-6:00 p.m.).

This event has been made possible by funding from the Committee for Campus Enrichment and the Michigan Tech Fund with production assistance from the Student Entertainment Board. This is a Heartland Arts Fund program.

Tech Arts Festival Main Event: Afro-Cuban All Stars

The Afro-Cuban All Stars, a big band with skills to burn and performances that simply dazzle, will be on the Michigan Tech campus on Sunday, April 9, at 8:00 p.m. in Fisher 135.

For tickets, call the Performing Arts Ticket Center (487-3200, Tuesday-Saturday, 11:00 a.m.-7:00 p.m.), stop by the Memorial Union Box Office (Monday-Friday, 11:00 a.m.-3:00 p.m.), the SDC Central Ticket Office, or purchase tickets online at <http://www.tickets.mtu.edu>.

What hits you first is the power of the music, the electrifying bass and the thunderous percussion behind the Afro-Cuban All Stars. You'll take a trip back in time to the glamour of the fifties, when the mambo and the cha-cha-cha were all the rage, and forward to the latest popular salsa rhythms. You'll hear the rich musical heritage of the island of Cuba in all its diversity, the rumbas, danzon, son-montono, afro, guajira, guaguanco, and other styles. The Afro-Cuban All Stars deliver them all and more in a feast of Latin jazz. From the oldest singer, 70-plus-year-old Manuel "Puntillita" Licea, who worked with the top big bands in the 1940s, to the youngest, 23-year-old Yanko Pisaco Pichado, one of the most promising trumpeters in Cuba today, a high-note trumpeter,

easily capable of playing above high C-sharp without losing sound quality, this band includes some of the very best musicians in Cuba today. The band's four generations of musicians positively sizzle with talent, and it's no surprise that they've enjoyed sold out performances all over Europe and the US where Latin music is receiving more attention than ever.

The Afro-Cuban All Stars were first brought together by Juan de Marcos González. He sought out the "young lions" of Cuban jazz, as well as some of the greatest musicians from Cuba's pre-revolutionary era, who were all but forgotten, subsisting on \$15-a-month pensions and menial jobs such as shoe-shining and rolling cigars. The band's Grammy-nominated debut on the CD "A Toda Cuba le Gusta" was essentially a homage to the heroes of González' youth—the great singers of the fifties. "Distinto, diferente," their soon-to-be-released album pays tribute to the diversity of Cuban music.

The Afro-Cuban All Stars' concert at Michigan Tech is made possible by the Memorial Union Board, the Committee for Campus Enrichment, and the Michigan Tech Fund and is coordinated through the University Cultural Enrichment Department (487-2844).

Tech Arts Festival: More Food on Film

Following the food theme for the Tech Arts Festival movie series, *Like Water for Chocolate* will be shown on Tuesday, April 11 (come early and members of the Memorial Union Board will be handing out chocolate kisses), and *The Cook, the Thief, the Wife and Her Lover* will be shown on Thursday, April 13. Both movies are free to MTU students, faculty, and staff and will be shown in Fisher 135 at 8:00 p.m. The delicious food prepared in the first will make you hungry; the second has scenes only for the strong of stomach.

The most successful foreign film in the U.S. in 1993, *Like Water for Chocolate*, an adaptation of the novel by Spanish writer Laura Esquivel, is a story about love, desire, and rebellion, interspersed with scenes of "magic realism," a genre common in modern Latin literature and film. The idea of magic realism is that magic can change the circumstances of the real world if it is transformed by the emotions of people in love. This makes for a romantic and beautiful movie full of intense images that'll stay with you for a long time. The setting is a small ranch in Mexico at the turn of the century. The story is about a domineering mother and her three daughters. The youngest, Tita, is passionately in love with Pedro, who wants to marry her. Tita's domineering mother, following tradition, needs Tita to stay home and look after her for the rest of her life. She refuses to allow the marriage, and offers Pedro Tita's older sister, Rosaura. He accepts because it's the only way he can think of to stay close to Tita. The food motif, a metaphor for life, is constant, as Tita pours all her repressed emotions into the food she prepares with astonishing and magical results. The cake Tita prepares tearfully for her sister's wedding causes the guests to weep; quail, prepared with the petals of red roses given her by Pedro, have an aphrodisiacal effect on the guests at the table.

The critically acclaimed movie *The Cook, the Thief, the Wife and Her Lover* is an uncompromising gesture of rage, a savage attack on the regime of prime minister Margaret Thatcher in Britain. Although set in Britain, the themes are universal. On the surface it could be interpreted as being about gluttony, lust, barbarism, and bad table manners, but read deeper and you will see that it is more than a fable of modern times. It is a satire about excess, set in a French restaurant in London where the chef meticulously prepares food that is beautiful as well as delicious. Every night, the gluttonous Albert visits the restaurant with his humiliated wife, Georgina, and a group of hangers on. The acting is brilliant and the sets amazing, but be prepared for some pretty strong stuff.

The movie series is selected by the Tech Arts Festival Committee and made possible by funding from the MTU Memorial Union Board.

Alcohol Risk-Reduction Programs Recognized

Universities may not be able to eradicate drinking among college students, but they can intervene to reduce the associated risks. Michigan Tech's approach has earned the University a \$500 check as a "best-practice" campus from United Insurance Management Company.

"Our programs at Tech are basically directed toward Greeks," said Associate Dean of Students **Steve Tyrell**. "There's always risk associated with alcohol, but we do what we can to minimize it." MTU's risk management officer, **Janet Hayden**, urged Tyrell to apply for the award.

The \$500 award will be used to provide Training Intervention Procedures, or TIPS, training to more students. TIPS trains Greek leaders to teach their brethren how to better manage parties where alcohol is available. "It helps them run a safer event," Tyrell said. "And peer education is far more effective than having a boring old administrator like me get up and talk." For example, TIPS teaches how to effectively cut off someone who's had a little too much without causing further problems, Tyrell said. About 200 of the 800 Greek members will receive TIPS training by the end of this year.

Tyrell also runs a risk management assessment program, taking a pre-party walk through a frat house and checking for possible perils. Will they check IDs? Do they let people have more than one drink at a time? Do they give rides home? Is the sober crew equipped to deal with potential troublemakers? How are they protecting against possible sexual assault?

And lastly, Tyrell talks about the consequences if something goes wrong, among them litigation.

It takes this multi-pronged strategy to truly make a difference in the number of alcohol problems. "We've come to realize that there isn't any quick fix," he said. "You need a number of approaches to do a party safely."

Dance with Style: Classes Start April 13

Get ready for the summer wedding and party season! Learn the basics of the most popular couples' dances, including swing, waltz, and polka. This class will also help you add some style to your slow dancing. Sessions will be held on Thursdays from 7:00 to 9:00 p.m. for five weeks beginning April 13 and ending May 11. Classes will be held at the SDC Dance Room 207.

The cost for a student couple is \$30 and \$40 for a non-student couple. Sign up at the SDC Central Ticket Office. Class size is limited. You may call the instructor, Cari Raboin, at 482-8322 with any questions.

Legendary Labor-Relations Professor Dies

Professor Emeritus **Carmen DelliQuadri**, who made his labor-relations students negotiate for their grades and loved to polka, died March 24 at the Benedictine Health Center in Duluth.

DelliQuadri, 83, was an ornament in what was at the time the Department of Engineering Administration in the Michigan College of Mining and Technology.

"He was a great teacher," said Associate Professor **Anton Pintar** (Chemical Engineering). "I had him for a class in labor relations, and I got along very well with him."

DelliQuadri received the Distinguished Teaching Award in 1972 and was named the School of Business and Engineering Administration's Outstanding Teacher in 1981. He also served on the State Board of Education and the State Board of Community Colleges, and was a fixture in the Democratic Party at the state and local level, earning the title Mr. Democrat of Houghton.

"His whole life and career were associated with the labor movement," Associate Professor **Paul Nelson** (SBE) said. "Before he came to Michigan Tech, he was chief economist for the United Auto Workers and worked with [UAW president] Walter Reuther. . . . He was active in Democratic politics, and I was on the other side, so we had a lot to talk about."

Nelson remembers DelliQuadri coming out against the Vietnam War back in the early 1960s, long before it was popular. "He thought the war stunk," Nelson noted. His conviction cost him local office but was typical of his independence. "He was a defender of the underdog," Nelson said. "And he was a mediator for many labor disputes," particularly involving area teachers unions.

In his classes, however, DelliQuadri focused on training future managers. It wasn't enough for his students, mostly engineering majors, to pass the tests. "They'd have to sit down one on one and bargain for their

grade," Nelson said. This sort of tactic was anathema to his conflict-avoiding students, but it provided skills rarely found in a textbook. "If they went to GM, got to be the front-line supervisor, and ran into the shop steward, they'd better know how to bargain," Nelson explained.

DelliQuadri was born in Pueblo, Colorado, in 1917 and married Wenda Bullen in 1939. After working as an elementary school teacher and principal, he earned a BA in Economics, History, and Political Science and an MA in Economics from the University of Colorado. Before coming to MTU, he was an assistant professor at the University of Detroit.

"He and his wife used to go polka dancing," Pintar said. And he was known for his unusual game of doubles tennis: Because of his bad knees, he'd stand in place and hit any ball that came near him, while his partner had to cover the entire rest of the court.

"He also used to do a lot of hunting," said Professor **Jim Gale** (SBE), "but his legs slowed him down a bit."

"He was active and respected in the faculty senate, and looked up to in many matters," Gale said. "He was a very enjoyable colleague and an idea person; he always had good ideas."

DelliQuadri retired in 1981 but remains memorable. "Last Saturday night, we had some friends over to our place and one of them was quoting him," Gale said. "He was reciting lessons he'd learned in Carmen's class as an undergraduate."

"People remember him, they respected him, and he was a valuable person to have around."

DelliQuadri is survived by his wife, three children, seven grandchildren, and a great-granddaughter. The family asked that memorials be sent to the Nature Conservancy or to the Michigan Tech Fund.

Keweenaw String Quartet Concert April 16

Submitted by the Department of Fine Arts

The Keweenaw String Quartet will present its spring concert on Sunday, April 16, at 3:00 p.m. in the University Theatre. The program features Alexander Glazunov's Five Novelettes for String Quartet, George Gershwin's "Lullaby," and Edvard Grieg's Quartet in G Minor. Tickets are available from the Performing Arts Ticket Center (487-3200), the Memorial Union and SDC box offices, <http://www.tickets.mtu.edu>, and at the door for \$7 general, \$4 students.

Members of the quartet are **Eric Lawson** and **Karen Kubin**, violins; **Anne Kearney-Looman**, viola; and **Brian Kubin**, cello. All are active soloists and recitalists as well as string teachers through the Copper Country Suzuki Association program. In the Keweenaw Symphony Orchestra, Lawson is concertmaster, and his colleagues serve as principals of string sections. Brian Kubin is artist-in-residence for the Houghton-Portage Township Schools, while Kearney-Looman serves as executive director of the Copper Country Suzuki Association.

The quartet is sponsored by Michigan Tech's Department of Fine Arts and the Copper Country Suzuki Association, with additional funding from the Michigan Council for Arts and Cultural Affairs.

For more information, call 487-2067.

A Hero for Daisy at Michigan Tech April 10

The film *A Hero for Daisy* will be shown Monday, April 10, at 7:00 p.m. in the Memorial Union Ballroom. Admission is free, and everyone is invited.

A Hero for Daisy tells the story of a group of women athletes who fought to obtain equal rights in sport. In 1976, Olympian Chris Ernst led nineteen members of the Yale women's rowing team to the athletic director's office to protest the lack of locker room facilities for women. The athletes stripped, exposing bodies emblazoned with the phrase "Title IX" (referring to the 1972 legislation which mandated gender equity in all institutions receiving federal aid). The story ran on the front page of the *New York Times* and was carried by all major international news

outlets the following day.

A Hero for Daisy is not only about achieving equality, but also about the significance of sport and the positive impact it has on the health of young girls. Statistics demonstrate that girls who play sports are 50 percent less likely to develop breast cancer, 80 percent less likely to have unwanted pregnancies, and 90 percent less likely to have drug problems.

Sponsors include the President's Advisory Council for Women's Athletics, the Presidential Commission for Women, Educational Opportunity, MTU Athletic Department, Graduate Student Council, Wadsworth Hall Student Association, and the Michigan Tech Fund.

Shakespeare Colloquium April 14

Felicia Hardison Londré will give a colloquium, "Putting Student Sleuths on the Trail of Shakespeare," on Friday, April 14, from 3:30 to 4:45 p.m. in Walker Theatre.

She will introduce the case of Edward de Vere as claimant to Shakespeare's works and suggest ways of teaching this in the classroom.

Londré is Curators Professor of Theatre at the University of Missouri—Kansas City, a Fellow of the American Theatre, and dramaturge for the Heart of America Shakespeare Festival, the Missouri Repertory Theatre, and the Nebraska Shakespeare Festival.

She is the author of nine books on theater. Her play, *Duse and D'Annunzio*, was made into an opera and produced in 1987, and she is the former president of the American Theatre and Drama Society.

Londré's address is free and open to the public. A reception will follow in the third-floor foyer of the Walker Arts and Humanities Center. Her visit is part of the Department of Humanities Teaching Effectiveness Colloquia Series and is funded by the MTU Presidential Commission for Women and the King-Chavez-Parks Initiative.

Michigan Tech Fund Merit Award Nominees Sought

If you know an outstanding senior student at Michigan Tech, consider nominating them for a Michigan Tech Fund Merit Award.

The awards are presented annually to a senior man and woman who have demonstrated extraordinary leadership and service to the University. Recipients are given a personal memento and a cash gift, and their departments each receive a \$500 grant. Nominees must be full-time seniors in good standing with a minimum 2.5 GPA.

President **Curt Tompkins** will present the awards Thursday, May 11.

The deadline for submitting nominations is April 19. Nomination forms are available at the Wadsworth Hall manager's office, the J. R. Van Pelt Library circulation desk, the Campus Store, and the Meese Center. You can also call Debbie at 487-3324 to have a form sent to you.

Mroz *Continued from Page 1*

US Forest Service.

He earned a BS in Forest Management and an MS in Forest Soils from Michigan Tech and a PhD in Silviculture from North Carolina State University.

"Glenn is well established as a leader in the School and has been very effective in his role as associate dean, so the transition should be pretty seamless," Interim Provost **Stephen Bowen** said. "We expect that the School will continue to prosper as we conduct a search for a new dean."

Mroz's appointment as interim dean is effective though July 31, 2001. After a new provost is named, a search committee will be formed to fill the position permanently.

NO NEW JOB POSTINGS

Michigan Tech has no new job openings this week. For information on previously posted positions that may be open, e-mail JOBS@MTU.EDU or call Human Resources at 487-2280.

Vacancy announcements are normally posted every Friday at 1:00 p.m. in the Human Resources Office. Complete job descriptions are available in the Human Resources Office, by calling 487-2280, or by e-mailing JOBS@MTU.EDU. Information regarding employment opportunities is available by calling the Job Line at 487-2895. Michigan Technological University is an equal opportunity educational institution/equal opportunity employer.

April

Fair Housing Month

- 7 **Friday**
8:00 a.m.—Charles Wallace, "Formal Specification: Toward a Practical Methodology"—Fisher 139
7:00 p.m.—International Nite—Memorial Union Ballroom
8:00 p.m.—*Bus Stop*—University Theatre
- 8 **Saturday**
8:00 p.m.—*Bus Stop*—University Theatre
- 9 **Sunday**
8:00 p.m.—Afro-Cuban All Stars—Fisher 135
- 10 **Monday**
7:00 p.m.—*A Hero for Daisy*—Memorial Union Ballroom
- 11 **Tuesday**
8:00 p.m.—Tech Arts Fest Film: *Like Water for Chocolate*—Fisher 135
- 12 **Wednesday**
noon—Parent Network Workshop—Memorial Union Alumni Lounge
4:00 p.m.—Tech Tea: Madeline Voelker on Puerto Rican food—Memorial Union Alumni Lounge
- 13 **Thursday**
7:00 p.m.—Open forum with provost candidate Thomas Hanley—M&M U115
8:00 p.m.—*Bus Stop*—University Theatre
8:00 p.m.—Tech Arts Fest Film: *The Cook, the Thief, the Wife and Her Lover*—Fisher 135
- 14 **Friday**
3:30 p.m.—Felicia Hardison Londré, "Putting Student Sleuths on the Trail of Shakespeare"—Walker Theatre
4:00 p.m.—Open forum with provost candidate Thomas Hanley—M&M U115
8:00 p.m.—*Bus Stop*—University Theatre
8:00 p.m.—Ballets Trockadero de Monte Carlo—Calumet Theatre
- 15 **Saturday**
8:00 p.m.—*Bus Stop*—University Theatre
- 16 **Sunday**
3:00 p.m.—Keweenaw String Quartet spring concert—University Theatre

MICHIGAN TECH FUND POSITION AVAILABLE

The following position is being posted by the Michigan Tech Fund:

Administrative Assistant—Michigan Tech Fund

To apply or for more information, send a letter of application, a resume, and three references no later than April 17, 2000, to Janice Henkel, Michigan Tech Fund, 1400 Townsend Dr., Houghton, MI 49931, telephone (906) 487-2310, e-mail jrhenkel@mtu.edu.