

Tech Topics

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Michigan Tech's Faculty-Staff Newsletter

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Ivy to Keynote Rozsa Center Dedication

Submitted by the News Bureau

William J. Ivey, chairman of the National Endowment for the Arts, will present the keynote address at public dedication ceremonies for Michigan Tech's new Rozsa (rose-ay) Center for the Performing Arts, on Thursday, October 5. The event is scheduled to begin at 5:00 p.m. at the center, and the public is invited.

Other special guests speaking at the dedication will include **Jim Klungness**, chair of the center's Setting the Stage Campaign; Mark Murray, treasurer of the State of Michigan; a representative of the family of James and Margaret Black, after whom the performance hall is named; **Robert Horner**, son of Samuel and Grace Horner, after whom the facility's lobby is named; and **Ted and Lola Rozsa**, whose major contribution provided the impetus for the fundraising that launched construction of the \$20 million facility.

The Michigan Tech Concert Choir, the Echoes From Heaven Gospel Choir, and the Keewenaw Symphony Orchestra will all perform at the dedication. The invocation will be given by the Rev. Tom Anderson of Grace United Methodist Church in Houghton.

Following the dedication, a reception will be held in the lobby of the center, and public tours of the building will be conducted.

The inaugural recital in the Center will be held Friday, October 6, and will feature pianist James Tocco. The inaugural concert will be held the following evening, October 7, featuring the Grand Rapids Symphony Orchestra.



MTU License Plates—On Sale Soon!

Keep a green tree in your heart and perhaps the singing bird will come.

—CHINESE PROVERB

MTU a Partner in NSF Engineering Research Center

Michigan Tech is collaborating in an unprecedented engineering partnership involving the University of Michigan, Michigan State University, and twenty corporations. Researchers at the three universities are turning their attention to developing miniscule devices that can do everything from help predict the weather to restore hearing to the deaf.

With major funding from the National Science Foundation, the Engineering Research Center for Wireless Integrated Microsystems (known as ERC/WIMS) was officially established September 1, with the University of Michigan serving as lead institution and with an initial budget of \$60 million over a ten-year period.

The U of M is an acknowledged leader in developing microelectromechanical systems with wireless capabilities, while Michigan Tech was tapped for its expertise in machining with microscopic cutting tools and for its

education programs, including distance education.

Among the center's first projects is the design and construction of a "smart" tool for use in implanting a new cochlear implant. These tiny, tube-shaped devices are already restoring hearing for many people with profound hearing loss. They are surgically inserted into the cochlea, a coil-shaped part of the inner ear, and transmit electrical impulses directly to the auditory nerve, bypassing portions of the ear's interior that are damaged by disease or injury. However, their sound quality has been compared to an AM station fading out on the edge of its range, largely because the implants are limited to only 28 stimulating electrodes. The ERC/WIMS researchers plan to more than quadruple that number, to 128 electrodes, said Associate Professor **Craig Friedrich** (ME-EM), the center's technical leader at MTU and one of several faculty who will be contributing to the

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Secretary of State Launches University License Plate Program

On October 2, the Houghton Secretary of State's branch office will kick off Michigan Tech's participation in the university license plate program.

"These license plates offer Michigan residents an opportunity to show pride in the university of their choice while at the same time helping the universities raise some much needed revenue," Secretary of State Candice Miller said. "We know that friends and alumni across the state and the nation will want to 'be true to their school' by purchasing them when they go on sale."

The first \$10,000 received by the University through the license plate program will go to the Michigan Tech Alumni Association, with any additional revenues split equally between the Presidents Society and the Alumni Association.

"This is a demonstration of our appreciation to the Alumni Board for opening association membership to all former students of Michigan Tech," President **Curt Tompkins** said.

Motorists will pay an additional \$35 over their annual vehicle registration fee to purchase a fundraising license plate. That original fee includes a \$10 service fee for production and distribution of the license plate and

\$25 for the University. The plate can be renewed annually for \$10, in addition to the annual vehicle registration fee, with the \$10 going to the university.

The plates can be personalized and are available with the embossed disability designation. To see all the Michigan university plates, including Michigan Tech's, visit the Secretary of State Web site at <http://www.sos.state.mi.us/uplates/index.html>

If you want a plate but don't want it on your vehicle, a collector version of each license plate with the slogan "Be True To Your School" will be sold for a one-time fee of \$35, with \$25 going to the university.

University license plates can be ordered at any Secretary of State branch office, and by mail or fax beginning Monday. Forms are available at the Web address above. One hundred collector license plates will be available at the Houghton Secretary of State office. Once they are gone, you can order them by mail or fax.

Additionally, the Secretary of State Mobile Branch Office will be visiting selected college campuses to promote sales, including Saginaw Valley State University, in University Center, on November 4 during the football game with Michigan Tech.

New Staff

Alexis E. Snell has joined the chemical engineering staff as a secretary/receptionist. She was previously employed as a secretary at the White Pine Copper Refinery. She is married to Chad R. Snell, has a daughter, Phoenix Snell, and lives in Painesdale.

Heather D. Wilson has joined the International Education staff as a specialized clerk. She has a BS from Drury College, in Missouri, and is married to Bill Wilson. She has two children, Miranda, 5, and Joshua, 1, and lives in Chassell.

Craig R. Nuottila has joined the McNair Dining Services staff as a food service helper. He was previously manager of the Calumet Elks Lodge. He has an associate degree in business and hotel-restaurant management from Lansing Community College and lives in Laurium. Nuottila enjoys local history and collects mining memorabilia.

Christine Kuester has joined the Douglass Houghton Hall dining services staff as a food service helper. She was previously a housekeeper at the Holiday Inn Express. Kuester lives in Pelkie.

Samantha Rae Schwandt has joined the Residential Services Dining staff as a food service helper in Wadsworth Hall. She is married to Joseph Schwandt; has three children, Markus, 4, Alex, 3, and Faith, 1; and enjoys horseback riding and drawing.

Faculty Breakfasts, Lunches this Fall

This fall, Provost **Kent Wray** will be hosting the annual faculty breakfasts (at 7:30 a.m.) and luncheons (at noon) in the lobby of the Rozsa (rose-ay) Center on October 18, October 23, October 26, and November 2.

The breakfasts and lunches give faculty a chance to meet with the provost in an informal setting.

The invitations were sent via campus mail September 25. If you have any questions, contact Special Events at 487-2284 or events@mtu.edu.

MichiganTech

Bill Curnow, executive director, University Relations
Marcia Goodrich, *Tech Topics* editor
Tech Topics Web site: www.mtu.edu/level3/ttopics.html

To get *Tech Topics* via e-mail, send a message to MAJORDOMO@MTU.EDU saying SUBSCRIBE TECH-TOPICS-L

Information to be included in *Tech Topics* should be submitted to the *Tech Topics* editor in one of the following ways:

- 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 Students

Center for Teaching, Learning, and Faculty Development



By *William Kennedy*, director

Nicholas Lemann, in his 1999 book *The Big Test: The History of the American Meritocracy*, lays into one

of the sacred cows of college admissions, the Scholastic Assessment Test (SAT). In *The Big Test*, Lemann details the creation and increasing influence of aptitude testing as a primary determinant in the college admissions process and discusses the intended and unintended ramifications of these long-standing practices.

Lemann's book surveys the rise of standardized precollege aptitude testing, which was developed as a means of identifying an intellectual meritocracy to replace admissions processes based solely on economic and social privilege. Henry Chauncy, founding president of Educational Testing Services (ETS produces the SAT) and Harvard's James Bryant Conant are portrayed by Lemann as well-meaning reformers trying to overthrow an educational system geared to serving only the rich and the powerful.

Although standardized tests such as the SAT were intended to substitute brains for privilege in college admissions, the actual effects of using these scores over the last eighty years may have backfired. The primary purpose of the SAT is to predict the grades of first-year students. Looking at ETS's own data, ETS reports that SAT scores covered about 25 percent of the variability when one compares test scores to first-year college grades. That means 75 percent of the variability in college performance of an average student will be affected by factors not measured by the SAT. High school grades, taken alone, were as predictive as SAT scores. When combined, high school grades and SAT/ACT scores covered only about 36 percent of the variability.

Meanwhile, Lemann maintains that IQ-like tests, such as the SAT, may not be a valid measure of raw or innate intellectual ability but may be measuring other factors involving the quality or range of opportunities associated with a high school student's educational experience. He points out, for example, that standardized tests scores highly correlate with family income. For families earning less

than \$10,000 per year, for example, the average SAT score in 1997 was 876. For families earning over \$100,000, the average score was 1130 with a nearly perfect linear relationship at all income levels in between. As family income is predictive of SAT performance, less affluent groups (African Americans, Hispanics, and Native Americans), as one would expect, did poorly on these tests when compared to more affluent groups. Lemann writes "disproportionately poor, ill-nourished, and broken families, [African Americans] as a group were in a uniquely bad position to perform well on tests designed to measure such school-bred skills as reading and vocabulary and mathematics fluency." Do the tests measure ability or opportunity? Recognizing the irony that standardized testing appeared to be furthering the very agenda it was intended to derail, an ETS scholar in the early 1980s devised a statistical correction factor that could be applied to SAT scores to counter bias potentially associated with a student's socioeconomic status (and, presumably, educational opportunities and support). ETS withdrew funding from this project, perhaps recognizing the controversy likely to arise as a result of applying such a correction factor that might be interpreted as simply disadvantaging students from higher socioeconomic groups for the sake of those from less-affluent groups.

The whole mess sort of begs the question of the role that standardized test scores should play as criteria for admission into a high-quality, publically supported university such as MTU. Might we be overlooking a pool of students with tremendous but unrealized academic potential by paying too much attention to these scores? Should we recognize that many of our students with lower SAT scores may not be less able or bright, but may simply be the victims of a lack of opportunity, intellectual stimulation, and role-modeling. I'd like to think that MTU has just such a proud tradition of providing top-quality scientific and technical education to students who could otherwise not afford it. Almost half of our students come from families where neither Mom nor Dad finished college. Let's not lose sight of the fact that their kids, our students, may need our

MTU Vets: You Could Be Eligible for Benefits

If you served in the US military, you could be eligible for medical benefits through the Department of Veterans Affairs.

Since each case is unique, veterans should call 800-215-8262, extensions 2666 or 2810, to find out about eligibility. You can also visit the VA's Web site at <http://www.va.gov> for information about medical benefits and forms that can be completed on line or printed out.

If you have any questions, the following MTU employees, who are veterans, would be glad to help: Ken Moyle (KRC), 487-2750; Cindee Molnar (International Education), 487-2160 or cmmolnar@mtu.edu; and Bruce Wagner (Accounting), 487-2242, bfwagner@mtu.edu

Verville Makes Planet IT Best-Book List

Jacques Verville calls it his social contract. Planet IT calls it a must-read for companies on the verge of buying organization-wide software such as BANNER.

"Don't bet your company on any enterprise software vendor until you've read this," the IT Web site wrote in listing Verville's book among its Best Books on Enterprise Applications.

Verville, an assistant professor in the School of Business and Economics, coauthored *Acquiring Enterprise Software: Beating the Vendors at Their Own Game*, with his wife, Alannah Halington. Based on his PhD thesis, three years of research, and twenty-five years in IT and MIS, *Acquiring Enterprise Software* is a guide for organizations and entrepreneurs who may not know what they are getting into.

"A Fortune 500 company can take a big loss" if their enterprise software doesn't pan out, Verville said. "But a small company that makes a wrong choice can spend \$1 million and go belly up. This book helps them make the right choice."

The book provides a detailed blueprint for buying enterprise software, from organizing a project team and finding the right software for your corporate culture to developing a request for proposals and negotiating contracts. It also offers Fortune 500 case studies, including successes, failures, and the reasons for both.

Verville considers the book a fulfillment of his social contract because 1) he promised his sources he'd publish the information; 2) he's never going to get rich on the sales to what is admittedly a limited audience; and 3) he felt the book filled a need. "Too often, the wrong people make decisions on enterprise software, or only one person makes the decision without taking into account others' needs," he said. "So much can go wrong if you don't know what you are doing. . . . You are betting your organization on your choice of enterprise software, and if this book helps one person make the right choice, it's all been worth it."

Verville and Halington are collaborating on a new book tentatively titled *Optimizing Enterprise Software: Strategies for Gaining the "E" Advantage*, on using enterprise software to gain a competitive edge in the new economy.

Proposals in Progress

Investigators, their proposals, and their potential sponsors are

- **R. Christopher Williams** and **Thomas Van Dam** (Civil and Environmental Engineering), "Synthesis and Review of Superpave Implementation," MDOT

Where They Stand

Two MTU Departments Make US News' Rankings

U.S. News & World Report ranked two departments (Civil and Environmental Engineering, and Materials Science and Engineering) among the top undergraduate engineering departments with PhD programs in their *America's Best Colleges* 2001 edition.

"I think that having two of our programs reach this level of recognition is really great, and we should commend the faculty, staff, students, and alumni who have all worked together to reach this status," Dean of Engineering **Bob Warrington** said. "It's certainly in keeping with our strategic plan and our vision to become a national university of choice."

"Now we need to have more of our departments reach this level of recognition, not only with *US News* but also with the National Research Council and other organizations and publications that examine the reputation of universities and degree programs," he said. "That will help us in recruiting students, faculty, and staff, as well as move us up into the top tier of Michigan's public universities."

Here are the *US News* rankings in the relevant categories:

Materials

1. U. of Illinois-Urbana-Champaign
2. Massachusetts Inst. of Technology
2. Northwestern University (IL)
4. University of Michigan-Ann Arbor
5. Pennsylvania State U.-University Park
5. Stanford University (CA)
7. University of California-Berkeley
7. University of Florida
9. Cornell University (NY)
10. Carnegie Mellon University (PA)
10. Georgia Institute of Technology
- 12. Michigan Technological University**
13. Purdue Univ.-West Lafayette (IN)
13. Rensselaer Polytechnic Inst. (NY)
13. Univ. of California-Santa Barbara
16. North Carolina State U.-Raleigh
17. Ohio State University-Columbus
17. University of Pennsylvania
17. Univ. of Wisconsin-Madison
20. Case Western Reserve Univ. (OH)

Environmental/Environmental Health

1. U. of Illinois-Urbana-Champaign
2. Stanford University (CA)
3. Massachusetts Inst. of Technology
3. University of California-Berkeley
3. University of Michigan-Ann Arbor
6. Georgia Institute of Technology
7. California Institute of Technology
7. University of Texas-Austin
9. Northwestern University (IL)
10. University of Florida
11. Carnegie Mellon University (PA)
11. Johns Hopkins University (MD)
- 11. Michigan Technological University**
14. Virginia Tech
15. Univ. of Wisconsin-Madison
16. Cornell University (NY)
16. Purdue Univ.-West Lafayette (IN)
16. Univ. of California-Los Angeles

Student Forum October 2 on the Uninsured

A student dialogue on Americans without health insurance will be hosted by students in one of the Perspectives on Inquiry section, Here's to Your Health: Who Decides What Health Care You Need? on Monday, October 2, from 7:00 to 8:30 p.m. in the Memorial Union Alumni Lounge. All members of the University community are invited.

The program will include background information and an orientation to key health issues—health coverage, funding and proposed reforms—being addressed by candidates and voters this election year. Faculty are asked to encourage interested students to attend the dialogue. Funding to support this event was awarded to the Local League of Women Voters of the Copper Country (LWVCC) by a joint "Join the Debate" initiative of the Henry J. Kaiser Family Foundation and the national League of Women Voters Education Fund. LWVCC is supervising the administration of this grant, while MTU students Finlandia students allocate budget funds. A similar dialogue will be conducted on October 9 by students at Finlandia University.

For more information, contact Carolyn Weissbach at cweissba@mtu.edu or weissbach@bresnanlink.net.

Homecoming Activities—Everyone Can Play

The Varsity Club, Interfraternity Council, and the Undergraduate Student Government are inviting all members of the MTU community to attend Homecoming activities. Arm wrestling is on Wednesday, October 4, at 6:00 p.m. in the balcony of the ROTC gym. The volleyball team will host Ashland at 7:00 p.m. on Thursday, October 5, in the Wood Gym.

Homecoming recess begins at 3:00 p.m. on Friday, October 6, with a variety of competition challenges from 3:30 to 5:30 p.m. on the lawn by DHH and Walker. Another volleyball game, this time against Findlay, begins at 5:00 p.m. in the Wood Gym. The Hobo Parade starts at 6:00 p.m. at the Citgo station in downtown Houghton and proceeds down College Avenue, followed by the hockey game against Northern Michigan at 7:35 p.m.

On Saturday, October 7, the football game against Northwood begins at noon at Sherman Field. The queen coronation is held during halftime.

Grand Rapids Symphony Master Classes October 7

Submitted by University Cultural Enrichment

On Saturday, October 7, at 1:00 p.m. in the Rozsa (pronounced rose-ay) Center for the Performing Arts, the public is invited to attend master classes offered by members of the Grand Rapids Symphony Orchestra.

Music lovers and musicians are invited to watch and listen as these professionals put some local musicians through their paces. The results at such classes are interesting and often dramatic as students respond to their teachers. The audience can really see and hear the difference in playing and interpretation, and sometimes the improvement is amazing. The orchestra's own DeVos Quartet, a nationally acclaimed ensemble, will be teaching string classes, with other orchestra musicians teaching flute and horn classes.

Participating students will have been chosen before October 7; however, all are invited to be a part of the audience for the classes. There is no admission charge.

The Grand Rapids Symphony Orchestra residency, which includes the gala inaugural concert at the Rozsa Center, is made possible with funding from the Katherine M. Bosch Endowment. The residency will also include two concerts for area schools, the first events in a yearlong series of outreach activities funded by a grant from the John S. and James L. Knight Foundation. For further information contact Great Events at the Rozsa, 487-2844.

Arapaho Photo Exhibit at Finlandia through Nov. 17

An exhibit by photographer Sara Wiles is on display through November 17 at Finlandia University's Finnish-American Heritage Center in Hancock.

The exhibit, "Ni'ihii": In a Good Way, Photographs of Wind River Arapaho 1976-1996," is on loan from the Buffalo Bill Historical Society in Cody, Wyoming, and is sponsored jointly by Michigan Tech and Finlandia as part of Native American Heritage Month.

Wiles's photographs were taken on the Wind River Reservation, in Wyoming, and reflect contemporary Arapaho life, as well as its values and traditions. She has worked on the reservation since 1973, as an anthropology student, a social worker, a consultant, and a photographer. In 1977, she was given the Arapaho name Nono'usei, or Sky Woman.

The exhibit is made possible in part by a grant from the Wyoming Council for the Humanities and is free and open to the public. The center's hours are 8:00 a.m. to 4:00 p.m., Monday through Friday.

Rozsa Center Architect, Designer Tell Center's Secrets

Submitted by University Cultural Enrichment

The newest addition to the Michigan Tech campus, the state-of-the-art Rozsa (say rose-ay, like the wine) Center for the Performing Arts is not only a striking piece of architecture, but a treasure house of interesting design features and sophisticated technology. Gunnar Birkerts, architect, and George Izenour, theater designer, the two key figures in the design and construction of the Rozsa, will present the 2000-01 Katherine M. Bosch Lecture, an illustrated presentation about the project, on Wednesday, October 4, at 8:00 p.m. In addition to slides shown by the two speakers, there will be a demonstration of some of the unique, computer-controlled special equipment in the stage house and the performance hall. Titled "Process and Expression in Architectural Form," the lecture is free and open to the public and will be held in the James and Margaret Black Performance Hall in the Rozsa Center.

Throughout the design, planning and construction processes, Birkerts and Izenour carefully considered, and for the most part implemented, the needs and ideas of the end users—the University Cultural Enrichment/Great Events Series and the Department of Fine Arts, which are now delighted to be residents in the building.

Birkerts is an award-winning architect who has designed major innovative and distinctive buildings as far afield as Ankara, Turkey; London, England; Caracas, Venezuela; Helsinki, Finland; and Florence, Italy; and as close to home as Duluth, Detroit, Ann Arbor, and Minneapolis. Other architects admire his use of materials and respect for fine craftsmanship, for the expressive outer forms generated by the interiors he gives his buildings, and for his response to surrounding natural shapes "Architects are not omnipotent creatures, but rather interpreters of building circumstances," says Birkerts. "They respond to the demands of place, purpose, climate, and available building materials and building technology. Allegiance to history and culture, and not simply the mode of today, is essential to the lasting quality I strive for in my architecture."

Born in Riga, Latvia, Birkerts trained in Germany and began his professional career

Board of Control Meets October 5

The Board of Control will meet on Thursday, October 5, at 9:00 a.m. in the Memorial Union Ballroom. Agenda items include the external auditor's report and an update on the proposed Enterprise Park, by **Pete Radecki**, executive director of corporate services.

Board of Control meetings are open to the public, and all members of the University community are welcome to attend.

when he moved to the U.S. to work in the office of the visionary modernist Finnish architect Eero Saarinen. He served on the faculty of the University of Michigan College of Architecture and Design for more than thirty years.

Izenour is professor emeritus of theatre design and technology and director emeritus of the Electro-Mechanical Laboratory of the Yale University School of Drama, where he taught for thirty-eight years.

He is an international authority in the fields of theater design, engineering, and acoustics. He has served with distinction as author, lecturer, inventor, designer and engineering consultant, and wrote the section on theater design for the 1974 edition of the *Encyclopedia Britannica*.

Izenour has designed many theaters and performing arts centers around the world and in Canada and the U.S. He is currently at work on several new projects, most notably a \$24-million performing arts center in Matunne, Venezuela.

This lecture was funded by the Katherine M. Bosch Endowment. For further information call the Rozsa Center, Great Events at 487-2844.

Important! Instructions on How to Say "Rozsa"

It has been brought to *Tech Topics* attention that some members of the Michigan Tech community are pronouncing "Rozsa" in ways that are, shall we say, just a tad idiosyncratic.

Normally, this wouldn't be a problem, since eventually everyone will catch on to the correct pronunciation. But since **Ted** and **Lola Rozsa** are coming to town soon to help dedicate the structure named in their honor, it only seems right that those of us benefiting from their generosity do them the small courtesy of saying their name right. So here it is. . .

It's "ROSE-AY," LIKE THE WINE.

Everybody got it? Now, if you are one of the folks who have been saying "Rosa," as in Ms. Parks' first name, stop doing that. And don't say nobody ever told you how to pronounce "Rozsa" right, OK?

Sports Shorts

Submitted by *Dave Fischer*

Kid's Day This Saturday at Sherman Field

Saturday, September 30, is Kids' Day at Sherman Field, when the Michigan Tech Huskies host the Hillsdale Chargers in an important Great Lakes Intercollegiate Athletic Conference football contest. Opening kickoff is set for noon.

All those 16 and under will be admitted absolutely free as part of the Kids' Day celebration. Blizzard T. Husky, the official mascot of the Huskies, will be on hand and have various prizes for children.

Michigan Tech is 2-1 on the season both overall and in the GLIAC. The Huskies have beaten Hillsdale in each of the last two seasons.

For ticket information, call the SDC Ticket Office at 487-2073.

Skate with the Huskies Saturday

"Skate with the Huskies," sponsored by the Michigan Tech Blueline Club, is set for Saturday, September 30, immediately following the Huskies' annual Silver/Gold Intrasquad Hockey Game at the MacInnes Student Ice Arena.

The Silver/Gold game will begin at 7:05 p.m. with Skate With the Huskies following at approximately 8:30 p.m.

Skate with the Huskies is a family event that gives fans of the Michigan Tech hockey team a chance to skate with members of the Hockey Huskies in an informal setting. Fans must bring their own skates and no sticks will be allowed on the ice.

All those attending Skate With the Huskies will receive a free MTU Hockey Face Poster and players will autograph the poster during the event.

All are welcome.

Admission to the Silver/Gold Intrasquad Game is a \$1.00 donation with all proceeds going to youth hockey. There is no admission charge for Skate with the Huskies.

Collin Raye Pre-Show Dinner at the Union

Great food (barbecued chicken 'n' ribs and all the trimmings), great music from Silverado, the favorite, local country band, and great entertainment from Karen Kautto and her country dancers are on the menu for the Collin Raye pre-show dinner. Tickets are just \$10 per person and are on sale at Rozsa Center Ticketing Services. Diners are encouraged to come in their snappiest country finery, as prizes will be awarded to the best-dressed country couple. The dinner is scheduled for 5:30 p.m. on Saturday, October 14, in the Memorial Union Ballroom. Call 487-3200, stop by the Rozsa Box Office, or purchase tickets on-line at <http://www.tickets.mtu.edu>. Sorry, the Collin Raye performance is sold out.

Senate Hears Tech Park Overview

Executive Director of Corporate Services **Pete Radecki** outlined a proposal to create a technology park in Houghton County before the University Senate September 27.

The proposed Michigan Tech Enterprise Park, or MTEP, would "create, attract, retain, and expand technology-based companies and their research enterprises by creating a nurturing place for technological innovation," according to an overview of the draft proposal.

Radecki said organizers are planning to submit a proposal to the State of Michigan to have the area designated a "smart zone." The state is planning to provide a national marketing campaign to publicize the smart zones and attract entrepreneurs to those areas. A portion of those businesses' state taxes would be "captured"—diverted to the smart park governing boards and used for administration, operations, and related expenses. The proposal is being submitted to the state by the cities of Houghton and Hancock, with the University, the Keweenaw Industrial Council, and other local economic development organizations providing support.

With a pool of engineering and technically trained graduates, the Houghton area is in a unique position in the new economy, Radecki said. Every year, MTU graduates who would rather live in the Copper Country move away to find jobs. Meanwhile, high-tech employers throughout the US cope with high turnover as employees are lured elsewhere. Technology firms that come to a smart park here would not only have access to a valuable pool of high-tech employees, they would also be less likely to lose them, since many employees would probably prefer to stay in the local area. As an example, Radecki said that Board of Control Member Bronce Henderson's local engineering office has experienced virtually no turnover since it was established about two years ago.

Faculty could benefit through increasing opportunities for technology transfer, he said.

Provost's In Box Runneth Over

If you sent an e-mail to the new provost and haven't heard back yet, don't take it personally. When his computer was finally able to download messages, nearly 1,600 flooded his in box. "I've not been reading a lot of those," **Kent Wray** told the University Senate at its September 27 meeting.

However, he is keeping up with the current flow. So, he said, if anyone sent an important message before last week, he invites you to send it again.

Wray updated the senate on plans to replace Sung Lee, who retired recently as vice provost for research and dean of the graduate school. He said he is considering changing the title to vice president for research, though the position will still report to the provost. The change would not cost the University additional funds, Wray said.

In addition, the Graduate Council is being consulted about the advantages the might result from separating the Graduate School from the research office, he said.

Wray asked the senate for guidance on forming a search committee to fill Lee's position. "Since this is a chief research officer, I want broad representation from the research community," he said, and the current policy doesn't permit that.

The senate did not act but expressed no objections to Wray's proposal. Senator **Wayne Pennington** (Geological Engineering and Sciences) said the senate could pass a motion in support of Wray's suggestion.

And having more engineering and technology firms in the local area would give MTU students access to many more internships, summer jobs, and co-op positions.

As a technology-transfer organization, MTEP would rely on the support and participation of Michigan Tech's research faculty, Radecki stressed. "If it doesn't involve research faculty, it's not worth doing," he said, asking for a show of support from the senate.

"The community feels it's time for something like this," said Phil Musser, representing the Keweenaw Industrial Council. The area already has about thirty to thirty-five technology-based firms, even without an organization such as MTEP to provide encouragement, he noted.

Senators asked how MTEP would differ from MTU's former technology-transfer effort, Ventures. The primary difference would be that MTEP would not own the businesses, Radecki said. Instead, it would assist start-ups find space, provide business and financial services, and run an "incubator—high-tech space not otherwise available in the region."

Senator **Kelly Strong** (SBE) was skeptical. "There has to be risk," he said. He asked how much MTEP would cost the general fund and how much Michigan Tech stood to lose. Radecki said no general fund money had been promised, and that funding would come mainly from business donations, lease revenues, and captured tax revenues.

As the smart park becomes established, MTU may provide some services for a fee, such as administering benefits and providing network access. The University would be paid for these services, Radecki said.

In other business, Senate President **Robert Keen** reported on behalf of the Curricular Policy Committee that it was working on five new PhD programs: forest molecular genetics and biotechnology, engineering physics, astrophysics, atmospheric sciences, and biomedical engineering.

September

Hispanic Heritage Month

- 29 **Friday**
4:00 p.m.—Robert Ridkey, "Why Teacher Certification Should Be Part of the Geoscience Degree"—Dow 610
7:00 p.m.—Volleyball, Wayne State at MTU—SDC
- 30 **Saturday**
noon—Football, Hillsdale at MTU—Sherman Field
7:00 p.m.—Volleyball, Hillsdale at MTU—SDC

October

National Disability Awareness Month

- 4 **Wednesday**
8:00 p.m.—Gunnar Birkerts and George Izenour, "Process and Expression in Architectural Form"—Rozsa Center
- 5 **Thursday**
9:00 a.m.—Board of Control meeting—Memorial Union
5:00 p.m.—Dedication ceremonies—Rozsa Center for the Performing Arts
7:00 p.m.—Volleyball, Ashland at MTU—SDC
- 6 **Friday**
5:00 p.m.—Volleyball, Findlay at MTU—SDC
7:35 p.m.—Hockey, Silver/Gold Intr Squad—Student Ice Arena
- 7 **Saturday**
noon—Homecoming football, Northwood at MTU—Sherman Field
1:00 p.m.—Grand Rapids Symphony master class—Rozsa Center
7:05 p.m.—Hockey, Northern Michigan at MTU—Student Ice Arena

In Print

Assistant Professor **Ulrich H. E. Hansmann** authored a paper, "Computer Simulation of Biological Macromolecules in Generalized Ensembles," published in the *International Journal of Modern Physics C*, Vol. 8 (1999). With Nelson Alves (FFCLRP, USP, Brazil), he coauthored a paper, "Glass Transition Temperature and Fractal Dimension of Protein Free Energy Landscapes," published in the *International Journal of Modern Physics C*, Vol. 10 (2000). With J. P. Kemp and Zheng Yu Chen (University of Waterloo, Waterloo, Ontario), he published "Is There a Universality of the Helix-Coil Transition in Protein Models?" in *European Physics Journal*, Vol. 15 (2000).

Professor **Vladimir Tonchev** (Mathematical Sciences) coauthored a paper, "Maximal Arcs and Disjoint Maximal Arcs in Projective Planes of Order 16," in the *Journal of Geometry*, Vol. 67 (2000), with Nicolas Hamilton (University of Queensland, Australia) and Stoicho Stoichev (Technical University of Sofia, Bulgaria).

Micro-Engineering Research *Continued from page 1*

project. But so far, no housing exists that can protect all those microsensors and be safely pushed by the surgeon along the narrow, spiral route that leads to the auditory nerve.

"Our job is to take all those electronics and package them in something a little over an inch long and about 20 thousands of an inch in diameter, the thickness of five sheets of paper," Friedrich said.

Michigan Tech researchers will also be developing housings for miniature environmental sensors. In this case, "the environment" is anywhere, from the inside of a car to a worksite to the top of a tree. "A worker could have one of these sensors on a wrist-watch to determine if there were releases of hazardous chemicals, or a child could wear it and find out if they were near something that would bring on an asthma attack," Friedrich said. Another application could be predicting the weather. Throughout the US, many areas (including the UP) don't have enough weather stations to gather relevant data, and forecasts suffer as a result. Microsensors the size of a sugar cube could be left almost anywhere and relay information on barometric pressure, temperature, etc. to atmospheric scientists.

The problem for MTU researchers will be to develop housings that can be used for more than one type of sensor. Plus, they'll have to protect the sensitive microelectronics inside while exposing the sensor to potentially harsh environments. "There are a lot of challenges," Friedrich said. "That's why this is a ten-year project."

Lastly, the center will be involved in math

and science education at the high school, community college, and university level, developing course materials, experiments, and internship experiences. Plus, the three partner universities plan to offer the nation's first Master of Engineering degree in Integrated Microsystems, available both on campus and through distance education. "NSF is very excited about that program," Friedrich said. "The center faculty at each school would be adjunct faculty at the other universities, and students could take approved classes at the two other schools and get full credit toward a degree where they are enrolled. All the participants are very enthusiastic."

The NSF funded only two such Engineering Research Centers this funding cycle from among the ninety proposals, said Dean of Engineering **Robert Warrington**, the associate director of ERC/WIMS. "It gives us a really strong base on which to grow our microtechnology program, and it should also complement our biotechnology and information technology areas," he said. Over the length of the program, Michigan Tech should receive about \$5 million to \$10 million and involve most of the engineering departments, as well as a number of researchers throughout the College of Sciences and Arts.

Other MTU investigators involved in the center are Assistant Professor **Sheila Grant**, Assistant Professor **Orhan Soykan** (Biomedical Engineering), Professor **Mike Roggemann**, Associate Professor **Anand Kulkarni**, and Assistant Professor **Paul Bergstrom** (Electrical and Computer Engineering).

POSITIONS AVAILABLE AT MICHIGAN TECH

Job descriptions will be available at 1:00 p.m. on Friday, or by e-mail at <JOBS@MTU.EDU>. For a complete list of job openings, visit <http://www.admin.mtu.edu/hro/postings/index.shtml>

The following positions will be posted Friday, September 29, 2000, at 1:00 p.m. through noon, Friday, October 6, 2000, in the Human Resources Office.

- Administrative Aide N7—Research Services (UAW external posting only)
- Office Assistant N5—Rozsa Center for the Performing Arts (UAW internal and external posting)
- Senior Secretary N5—Department of Education (Full time during the academic year, part time during the summer; UAW external posting only)
- Carpenter—Facilities Management (AFSCME internal posting only)
- Food Services Helper—Residential Services-Dining (Regular, part-time position; hours variable; AFSCME internal and external posting)
- Assistant Research Scientist—School of Forestry and Wood Products
- Assistant Professor—Mathematical Sciences
- Assistant Professor—School of Forestry and Wood Products

University employees are reminded to apply in writing prior to noon, Friday, October 6, 2000, to be considered as internal candidates for bargaining unit positions only. Applicants from the recall pool will be given first consideration for non-bargaining-unit positions only. 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 or by calling 487-2280. More 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.