

Tech Topics

March 9, 2001
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Michigan Tech's Faculty-Staff Newsletter

Published weekly by University Relations

MTU Ad

Campaign Honored

Michigan Tech and its advertising agency, Russell and Herder, have won two Addy Awards from the Minnesota Advertising Federation.

Bill Curnow, executive director of University Relations, said Michigan Tech won top honors in the black and white newspaper ad and the outdoor (billboard) advertising categories. "I'm particularly pleased because images taken by UR photographer **Brian Parmeter** played a dominant role in both the newspaper and outdoor campaigns," he said.

Curnow noted that Tech's student recruiting spring campaign will begin a four-week run on March 12 in television and radio markets in Duluth-Superior, the U.P., Traverse City-northern Lower Michigan, and Wausau and Green Bay, Wisconsin. The current ads, designed to increase awareness of all Michigan Tech programs, will be supplemented by radio ads in the U.P. markets and will highlight recent AACSB accreditation for the School of Business and Economics.

Board of Control to Discuss Strategic Planning, MTEP

The Board of Control will meet on Friday, March 9, at 9:00 a.m. in the Memorial Union Ballroom.

Agenda items include strategic planning and an update on the Michigan Tech Enterprise Park. The Board is also expected to act on two proposed PhD programs, in Forest Molecular Genetics and Biotechnology, and in Computer Science; and on an MS program in Applied Science Education. Also on the agenda are room and board and apartment rental rates for the 2001-02 year.

The meeting is open to the public, and all members of the University community are welcome.

Education is what survives when what has been learnt has been forgotten.

—B. F. SKINNER

Remind Your Students

March 16 Is the Drop Deadline

Associate Dean of Student Affairs **Gloria Melton** is asking all faculty to announce to their classes that the last day to drop spring semester classes is Friday, March 16, by 5:00 p.m.

"Please encourage your students to reach their decisions on continuation in your class based on realistic assessment of the evidence and mastery of learning in the first half of the course, not on the basis of a hoped-for chance of catching on after the drop date," Melton said.

After the eighth week of the semester, the Office of Student Affairs will only consider requests for a late drop that involve circumstances beyond the student's control, such as prolonged illness; serious accidents or death in the immediate family or of a close friend; or similar situations. All requests must be made in writing. No late drops will be granted to avoid poor grades.

MTU Students, Faculty, Staff Receive Space Grants

In February, Michigan Tech faculty, staff, and students were awarded over \$50,000 in grants from the Michigan Space Grant Consortium.

Undergraduates received \$2,500 each, with graduate students receiving \$5,000. Proposals addressed problems in science, mathematics, engineering, technology, life sciences, or related educational research focused on space or earth system science, aerospace, and aeronautics.

The award winners, their proposals, and their advisors (for students) are Youth Programs Coordinator **John Lehman** (Educational Opportunity), "American Indian Biology, Computers, and Mathematics Workshop," "Summer Youth Program Space Science Exploration Course," and "Women and Explorations in Engineering Mentor/Keynote Speaker"; Associate Professor **Gregg Bluth** (Geological Engineering and Sciences), "Support for Minority Participants in an Earth System Science Education Course" and "Field Training for Teachers in Earth System Science Education"; Lab Supervisor **Eric Blough** (Biological Sciences), "Muscle Plasticity During Increased Loading and Unloading of the Rat Levator Auris Longus"; Research Assistant Professor **Matthew Watson** (Geological Engineering and Sciences),

"Routine Processing of Terra 1 Thermal Infrared Data Using Radiative Transfer Code to Retrieve SO₂ Burdens from Volcanic Clouds"; graduate student **Elly Bunzendahl** (Geological Engineering and Sciences), "Mitigation Proposal Concerning Sedimentation Effects of Santa Maria Volcano, Guatemala," advisor Bluth; graduate student **Jason Carter** (Biological Sciences), "Human Neural Organization During Acute Simulated Microgravity," advisor **William Cooke**; graduate student **Adrian Pishko** (Chemistry), "Copper Photochemistry in Natural Waters," advisor **Sarah Green**; undergraduate **Aaron Borgan** (ME-EM), "Low-Power Plasma Thruster Mass Flow Controller," advisor **Lyon King**; undergraduate **Shannon Kobs** (Geological Engineering and Sciences), "Use of Satellite Data to Study Ash and Gas Species Separation in Volcanic Plumes," advisor Bluth; and undergraduate **Daniel Lund** (ME-EM), "Design of a Digital Data Acquisition System for Plasma Thruster Research," advisor King.

MSGC has several different programs that support students, programs, and junior faculty or research scientists at MSGC-affiliate universities. For more information, contact Chris S. Anderson at 487-3539.

Data Solutions Offering Color Printing

IT-Data Solutions has a new Xerox Docucolor 12 Printer/Copier in Administration 217.

This printer is available to all of campus through the network and also provides walk-up color copying service. It can print your PowerPoint presentations, photos, maps, posters, brochures, and pamphlets.

To use this color printing service, have your systems administrator call IT Data Solutions at 487-2265 or David Hale at 487-3191.

MTU Notables

Undergraduate **Elise Anderson** (Materials Science and Engineering) has received the \$2,000 International Symposium on Superalloys Scholarship, given annually by the Materials, Metals, and Materials Society (TMS). MTU students received two of the TMS awards for the 2000–01 academic year. The other recipient is Cicely Coppock, who was awarded the Light Metals Division Scholarship.

Graduate student **Katie Vandebrake**, who is working on a PhD in Rhetoric and Technical Communication, has been awarded the prestigious John Stephenson Fellowship through the Appalachian College Association for the 2001–02 academic year. She will receive a \$15,000 stipend to continue working on her doctorate at Michigan Tech.

Residence Life has awarded its annual International House Academic Book Scholarship to **Vikran Arul Chellappa**, a sophomore majoring in computer science, based on his essay, "How International Living and Learning at Michigan Tech Has Prepared Me for Success in an International World." Chellappa, who is a native of India, will receive the cost of his spring semester books, up to \$400, and will be recognized at the May Leadership Banquet.

Undergraduate **Maggie Miller**, a business administration major, is one of two students from US schools selected to be a student assistant for the Vision Resource Centre's Global Leadership Program in Prague. The four-week program held July 1-29, 2001, consists of university courses on leadership, business, human rights, communication, and gender. In addition, the students participate in cultural activities and community service. For more information, visit <http://www.visionresource.org>.

Correction

The February 23 *Tech Topics* stated incorrectly that Provost **Kent Wray** would be a member of the graduate dean search committee.

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.

Just-In-Time Education, Part 2

By William Kennedy, director

Center for Teaching, Learning,
and Faculty Development



the college years tends to follow a common hierarchical pattern. It begins with the simple acquisition of distinct knowledge bits and culminates in the ability to abstract and apply principles garnered in one domain into unrelated domains. A similar development pattern also seems to manifest itself in terms of affective development. Students commonly come to the university looking for black-and-white answers and only gradually begin to flesh out an array of tools and techniques for assigning value to competing notions. If the intellectual, affective, and ethical development of college-age students tends to follow certain definable patterns, perhaps we should examine the ways in which our degree programs are structured to complement or conflict with these patterns.

Developmental theorists argue that many entering students come to the university to passively and rather dispassionately gather discrete facts from faculty experts. If our desire were to meet student expectations and remain in their initial comfort zone, beginning courses would be composed of a series of proscriptive lectures from which our students would dutifully take notes, read the textbook, and then regurgitate their newly acquired knowledge bytes and canned problem-solving protocols on quizzes and exams. Everybody would seem happy and nobody would get their feathers ruffled, according to the theory.

To more effectively foster their growth and development, however, it would be better for us to continuously urge students to move

Nearly a half-century ago, Benjamin Bloom proposed that cognitive development during

beyond their comfort zones intellectually, emotionally, and ethically. The remarkably positive student reaction to *Perspectives on Inquiry* lends credence to the argument that many students respond well to aggressive provocation. If continuously urging our students to move up the developmental chain became a common curricular strategy, then entry level courses might focus on fostering coherent disciplinary understandings at the earliest opportunities in conjunction with basic acquisition of knowledge.

To encourage engagement, early courses might focus on the various avenues of expression associated within each disciplinary framework. It would seem that the Engineering Enterprise initiatives are tailor-made to foster such timely growth. Students involved with similar initiatives, such as FutureCar, speak glowingly of their education coming alive as they worked together to solve real-world problems using the tools they had gained in the classroom. One participant recently told me, "Working on an intensive project like this with real deadlines and depending on other people let's you know whether you're in the right field and whether or not this kind of enterprise is something you want to devote your life to."

Encouraging students to develop robust ethical underpinnings for their professional lives might also be a function of our senior project and senior design initiatives. Giving students the opportunity to consider the financial, ecological, and moral dimensions of their profession seems an essential element of a high-quality education.

Recognizing human developmental patterns and tailoring our educational programs to complement those patterns might be one way to improve the quality of education our students receive.

Sports Shorts

MTU Women Hoops to Host NCAA Regionals

Michigan Tech will host the 2001 NCAA Division II Women's Great Lakes Regional Championship this weekend.

The tournament will feature six teams, including Gannon, Southern Illinois-Edwardsville, Northern Michigan, Northern Kentucky, Southern Indiana, and Michigan Tech.

Tournament play will tipoff Friday, March 9, as Northern Kentucky and Gannon square off at 5:30 p.m., while Northern Michigan and SIU-Edwardsville play at 7:30 p.m. Semifinals will follow on Saturday, March 10, with the regional championship game taking place on Sunday, March 11, at 7:00 p.m.

Michigan Tech (26-3, 16-2 GLIAC) will begin action on Saturday at 7:30 p.m., as it takes on the winner of the Northern Michigan/SIU-Edwardsville contest. The Huskies have now won their last 14 outings, including an 84-66 victory over Gannon in the March 3 Great Lakes Intercollegiate Athletic Conference Tournament championship game.

Tickets are \$7 reserved seating, \$5 general admission, and \$4 student general admission.

Nordic Skiers Go to National Championships

The men's and women's Nordic ski teams both placed second at the NCAA Central Regional competition in February. **Amanda Shanight** and **Christopher Seaman** both qualified for the Division I National Championships being held March 7–9 in Middlebury, Vermont. This marks the ninth time since 1988 that Tech has sent Nordic skiers to the Nationals. The men's team has a 3.68 GPA, while the women sport a 3.62.

Concerto Competition Winners Present Recital March 15

Submitted by the Department of Fine Arts

The intimacy and fine acoustics of McArdle Theatre will showcase the talents of the three winners of the Keweenaw Symphony's Concerto Competition, on Thursday, March 15, at 8:00 p.m.

"This is a rare opportunity to share an evening of wonderful music, beautifully played by three superb musicians," says **Milton Olsson**, chair of the fine arts department. "We're delighted to be able to bring these talented young people to the Keweenaw, and know their visit will be a highlight of the year for everyone who hears them." The three will perform twice during their stay in Houghton, in recital on Thursday evening, then with the KSO in concert on Sunday in the Rozsa Center.

Ashu Kejariwal, virtuoso on alto sax and winner of the Concerto Competition's collegiate division, will be joined by violinist Eunice Keem and cellist Elizabeth Chung, high school division winners. Accompanists for the recital are Nancy Royce Martin of Negaunee and Neil Paynter of Hancock. For the recital, Kejariwal will play music of Ibert, Villa-Lobos, and Demersseman. Keem's pieces include Prokofiev's Violin Sonata No. 2, Bach's Solo Sonata No. 1, and Wieniawski's Polonaise No. 1. Chung will play Kodaly's Sonata for Solo Cello, plus music of Ravel and Bach.

KSO director **Jeffrey Bell-Hanson** describes Kejariwal as a world-class musician. He has won numerous concerto competitions and performed as soloist with symphony orchestras from New York to Hawaii to Europe. His musicianship on alto saxophone dazzles both judges and audiences. Kejariwal is a 21-year-old music major who graduates this spring from Northwestern University.

Eunice Keem, a high school junior from Northfield, Illinois, has been featured soloist with the Chicago Youth Symphony Orchestra, the Evanston Symphony, and the National Chamber Orchestra. She has taken first place in several competitions, and has appeared on National Public Radio's show-case for young musicians, *From the Top*.

Elizabeth Chung, from Schaumburg, Illinois, performs this month as soloist with the Harper College Symphony Orchestra as winner of its concerto competition, and recently won the string division of the Midwest Young Artist Concerto Competition. She is scheduled to perform as soloist on *From the Top* and will play in a piano trio with the concert violinist Midori in Washington, DC.

The KSO Concerto Competition began

The Shakespeare Shrinkers Are Back

Submitted by University Cultural Enrichment

The Reduced Shakespeare Company (RSC) is back, this time to repeat their very first production, *The Complete Works of William Shakespeare (abridged)*. Expert Shakespeare shrinkers, these zany guys careen through 37 plays and 154 sonnets in less than two hours. The standard warning for RSC productions will be printed in the program, namely that the show is "not recommended for people with heart ailments, back problems, American history degrees, bladder problems, inner ear disorders, and/or people inclined to motion sickness. The RSC cannot be held responsible for expectant mothers." This madcap adventure will take place at the Rozsa Center for the Performing Arts at 8:00 p.m. on Saturday, March 17. Tickets are available from Rozsa Center Ticketing Services (487-3200, Monday-Saturday, 8:00 a.m.-5:00 p.m.) or online at <http://www.tickets.mtu.edu>. And if you haven't bought a ticket yet, hurry because they're going fast.

The RSC, which should not be confused with that other company in England, the Royal Shakespeare Company (the one that presents the plays one at time and sometimes they're really boring), has appeared five times during a Great Events season. After their first production of *The Complete Works*, they annihilated American history with two performances a couple of years apart of *The Complete History of America (abridged)*. Then they battered the Bible with *The Complete Word of God (abridged)* and massacred the millennium with a rollicking musical in fall 1999.

True to their philosophy that absolutely nothing is sacred, the bad boys of abridgement romp through Shakespeare's plays and sonnets with the crazy slapstick comedy, verbal wit, and visual cleverness that local fans have come to know and love. Not only do

this year with sponsorship from the G. Cleaves Byers Memorial Fund and the Michigan Council for Arts and Cultural Affairs. Musicians ages 13-25 were invited to compete for cash awards and the opportunity to perform with the KSO during the Rozsa Center's inaugural year.

The three winners will be featured soloists with the KSO in the Rozsa Center on Sunday, March 18, at 3:00 p.m., when Kejariwal will present the Concerto for Alto Saxophone and Orchestra by Tomasi. Keem will play the first movement of Sibelius' Violin Concerto in D Minor, while Chung presents Tchaikovsky's Variations on a Rococo Theme.

Tickets for both events are available from Rozsa Center Ticketing Services (487-3200), other MTU box offices, the Calumet Theatre, and <http://www.tickets.mtu.edu>.

the actors make Shakespeare fun, they also make fun of the stuffy way that Shakespeare has been taught. They blend the comedies into a soap opera aptly named "The Love Boat Goes to Verona"; the histories become a football match between the kings; and to top it all off, Hamlet takes up the whole of the second half of the show with three different versions performed at breakneck speed, forwards and backwards. Ophelia gets drowned and then undrowned and then drowned again, bringing the show to a sidesplitting end. *The Complete Works* was first shown at MTU in 1993. The current version is likely to be somewhat different, as the company is constantly tinkering with the script to improve it and to keep the contemporary allusions up to the minute.

The Reduced Shakespeare Company's combination of sparkling wit and physical comedy has invited comparison with the Marx Brothers. However, RSC's irreverence and topical humor is more like *Saturday Night Live*, and there's much of Monty Python in their wacky spoofs.

The RSC has played on such prestigious stages as the Lincoln Center in New York, the Kennedy Center in Washington, DC, (where they have presented the national premiere of several productions) as well as at, according to the company, "many performing arts centers not named after ex-presidents." They've also enjoyed a long run in London's West End and have appeared at the Edinburgh Festival, as well as in Israel and several other countries.

The event is made possible through the James and Margaret Black Endowment with additional funding from the Committee for Campus Enrichment and is part of the Great Events at the Rozsa Series. Call 487-2844 or visit <http://www.greatevents.mtu.edu> for further information.

In Print

Professor **Vladimir Tonchev** (Mathematical Sciences) published a paper "Bush-Type Hadamard Matrices and Symmetric Designs," in the *Journal of Combinatorial Designs*, Vol. 9 (2001), jointly with Z. Janko (University of Heidelberg, Germany) and H. Kharaghani (University of Lethbridge, Alberta).

Assistant Professor **John van de Lindt** (Civil and Environmental Engineering) and J. M. Niedzwecki (Texas A&M) coauthored two articles: "Methodology for Reliability-Based Design Earthquake Identification" in the *ASCE Journal of Structural Engineering*, Vol. 126, No.12 (2000); and "Environmental Contour Analysis in Earthquake Engineering," *Engineering Structures*, Vol. 22, No. 12, (2000).

Continued on page 4

Classic Musical at Club Indigo March 12

by Joe Kirkish

Can you believe it? The greatest musical ever made for movies is now half a century old and still holds audiences captive. And it's being brought to you by the Mu Beta Psi music fraternity on Friday, March 16, at the Calumet Theatre.

Called Hollywood's most enjoyable musical ever by critics, *Singin' in the Rain* is one of the most optimistic, colorful and charming.

Its appeal, to be sure, is due to its glossy, bigger-than-life look at Tinsel Town and the filmmaking industry. But it's also a satirical view of Hollywood in transition from the silent films to talkies. Add to that a stellar cast headed by Gene Kelly, Debbie Reynolds, Donald O'Connor, and Jean Hagen and the entertainment value escalates.

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 www.admin.mtu.edu/hro/postings/index.shtml

The following positions will be posted Friday, March 9, 2001, at 1:00 p.m. through noon, Friday, March 16, 2001, in the Human Resources Office.

- Engineer/Grounds Supervisor—Facilities Management
- Managing Director, Isle Royale Institute—Physics (Temporary, one-year, full-time position)
- Custodian—Memorial Union (Third shift; AFSCME internal posting only)
- Building Mechanic—Residential Services Facilities (AFSCME internal posting only)
- Senior Clerk N2—Auxiliary Services (Regular, ten-month position; thirty-four hours per week; UAW internal and external posting)

University employees are reminded to apply in writing prior to noon, Friday, March 16, 2001, 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.

But there's more. A pair of accomplished composers from the 1950s, Freed and Brown, came up with memorable hits like "You Were Meant for Me," "Good Mornin'," and the all-time favorite title song.

Add to that not one but two opulently staged dance numbers, one featuring Cyd Charisse and Kelly in a 1920s-style gangster melodrama, "Broadway Rhythm," and the other, the masterminded show stopper of the title song featuring a solo by Kelly as a man in love, dancing exuberantly in a downpour, still considered one of Kelly's most inspirational numbers.

With Kelly and musical director Stanley Donner at the helm as co-directors, how could the movie fail? It didn't. In fact, it was an immediate hit when it appeared in 1952. On TV and tapes it has continued to please new and old audiences, a true classic in every sense of the word.

The movie begins at 7:15 p.m. Admission is \$3.50, and no reservations are needed. As part of the food and film feature created for Club Indigo events, a gourmet buffet precedes the movie for those who wish to enjoy a full evening of entertainment, for a total of \$12. The duo of Sweet Abby and Vianni will serve the 6:00 p.m. buffet, offering a multi-course meal in the style of Julia Child's New Wave cooking. The couple have been knocking people off their feet with their incredible edibles and promise to do the same at the Calumet Theatre.

Reservations should be made for the buffet. A call to the theater, 337-2166, during regular office hours will guarantee seating.

Club Indigo is presented monthly during the spring, summer, and fall. The next Club Indigo, on Friday, April 20, brings a relatively unknown Canadian classic, a 1975 heart-warming movie, *Lies My Father Told Me*. Watch for further details on this sometimes funny, sometimes sad, but always delightfully entertaining portrayal of a seven-year-old boy's loss of innocence, Canadian style.

In Print Continued from page 3

Assistant Professor **Jaroslav Drelich** (MSE) edited a special issue of the *Journal of Adhesion Science and Technology* on "Application of Scanning Probe Microscopy in Interfacial Phenomena," Vol. 14, No. 14 (2000).

Hockey coach **Mike Sertich** is featured in an article by Rachel Blount, "Sertich Rebuilding Career and Program at Michigan Tech," in the February 2 Minneapolis *Star Tribune*.

Assistant Professor **Sheila Grant** (Biomedical Engineering) has published a paper, "In Vitro and in Vivo Measurements of Fiber Optic and Electrochemical Sensors to Monitor Brain Tissue pH," in *Sensors and Actuators B*, Vol. 72 (2001).



March

National Women's Month

- 9 Friday**
9:00 a.m.—Board of Control meets—Memorial Union Ballroom
- 10 Saturday**
7:30 p.m.—Women's basketball GLIAC semifinal, MTU—SDC
- 11 Sunday**
7:00 p.m.—Women's basketball GLIAC championship—SDC
- 15 Thursday**
8:00 p.m.—KSO Concerto Competition Winners' Recital—McArdle Theatre
- 16 Friday**
6:00/7:15 p.m.—Club Indigo: Buffet/*Singin' in the Rain*—Calumet Theatre
- 17 Saturday**
8:00 p.m.—Reduced Shakespeare Company—Rozsa Center
- 18 Sunday**
3:00 p.m.—KSO with Concerto Competition Winners—Rozsa Center

Proposals in Progress

Researchers, their proposals, and their potential sponsors are

- **Barry Kunz** and **Warren Parger** (Electrical and Computer Engineering), "Fundamental Properties of Energetic Solids," Washington State University; "Photocatalytically Active Nanosurfaces for Sensing and Modification of Organic Chemicals," Oklahoma State
- **Ghatu Subhash** and **Elias Aifantis** (CAMMP), "Mechanical and Tribological Properties of Nanocomposites," LSU
- **Ravi Pandey** (Physics), "Theoretical Study of Chalcopyrite Materials," Georgia State
- **Elias Aifantis** and **Tamara Olson** (CAMMP), "Experiment and Theory for Materials at the Submicron Scales: Applications to MEMS," Case Western Reserve
- **Douglas Swenson**, **Stephen Hackney**, **Jaroslav Drelich** (MSE), **Sarah Green** (Chemistry), **Sheila Grant** (Biomedical Engineering), **Miguel Levy** (Physics), "Length Scale Effects on Resonance Energy Transfer-Based Biosensors," NSF
- **Ibrahim Miskioğlu**, **Burhanettin Altan** (MEM), **John Williams** (Chemistry), "A Novel Hybrid Approach to Nanoscale Characterization of Interphase in Bonded Material Systems," NSF
- **Jong Lee** (MSE) and **Ravi Pandey** (Physics), "Colossal Magnetoresistance and Lattice Strain: A Multiscale Modeling Study," NSF

Directory Change

The new phone number for **David Reed**, the interim vice provost for research, is 487-3043.