TechTopics

February 26, 1999
Vol. 31, No. 22

Michigan Tech's Faculty/Staff Newsletter — Published weekly by University Relations

Researchers explore high-speed ceramic grinding

Submitted by the News Bureau

An automobile with ceramic engine valves would allow for a higher engine temperature than current metal valves, and the higher temperature would provide better fuel economy. Unfortunately, the cost of ceramics makes their use in valves infeasible.

But now, two Michigan Tech researchers are working to find a technique that would produce low-cost, high-quality ceramics for industrial use. Professor **Abhijit Chandra** and Associate Professor **Ghatu Subhash** (ME-EM) have received a $278,956 grant from the National Science Foundation and a $10,000 Research Experience for Undergraduates Supplement, also from the NSF.

Due to the brittle nature of ceramics, defects are common. Two types of ceramics are currently produced, high-precision parts at a very high cost, and commercial parts, which are produced at a lower cost, but with some defects. Chandra hopes to find a new technique for high-speed grinding and polishing, which will produce "the quality needed, but bring the costs down."

"Sixty to eighty percent of the cost is in the finishing process; we hope to address this cost," he explains. He will experiment with introducing high-frequency vibrations, called modulations, to the process. These vibrations could result in a 30 percent to 50 percent reduction in damage depth, or 60 to 80 percent more material produced at the same damage depth. Chandra believes this work "could have significant impact on the efficiency and effectiveness of finished brittle materials, including structural ceramic parts and optical components, as well as the processing of silicon wafers for electronic applications."

Don't forget . . .

Family Fun Day this Saturday

Family Fun Day is this Saturday, from 10:00 a.m. to 5:00 p.m. at the SDC and the Memorial Union.

He who receives a benefit with gratitude repays the first installment on his debt.

—Seneca, 4 B.C.-65 A.D., "On Benefits"

General Electric executive gives major gift to MTU

Submitted by the News Bureau

John Opie, who graduated from Michigan Tech in 1961, and his wife, Ruanne, have donated one of the largest gifts that the University has ever received from an individual donor—$3.6 million.

"This gift is our contribution to the Capital Campaign and the continual improvement of Michigan Tech," Opie said. "I really want to give back to Tech and in some way repay them for what they gave me." Opie, 61, is vice chairman and executive officer of General Electric Company, where he has spent his entire career.

A native of Detroit, he earned a Bachelor of Science in Metallurgical Engineering from MTU. The gift was announced at the semiannual meeting of the Michigan Tech Fund Board of Trustees in Dearborn.

Michigan Tech has launched a capital campaign to raise $100 million over the next five years. **Dick Robbins,** an MTU alumnus serving as national campaign chair, said, "John and Ruanne Opie's gift provides us tremendous momentum as we enter our campaign. This transformational gift will greatly enhance the University's ability to continue to attract quality faculty and students.

"John Opie has shown his commitment to Michigan Tech since the day he graduated, with many forms of service. He believes in Tech and he believes in higher education."

Opie is confident that the University's $100-million Capital Campaign will be successful, and he hopes his gift spurs others to support the effort. "All together, we can make it work," he said.

Opie's gift is just one of many that he and his wife have made since his graduation. His involvement with the University has been extensive. He was vice chair of Michigan Tech's 1983–87 Capital Campaign. He was a trustee of the Michigan Tech Fund for thirteen years and president for two years. He has received MTU's Board of Control Silver Medal, has been named a distinguished alumnus, received an honorary doctorate degree, and has been commencement speaker.

In addition to his and his wife's personal giving, Opie also has arranged for several gifts from GE to the University.

Michigan Tech is in the early stages of its "Leaders for Innovation" campaign to attract $100 million in private gifts. The five-year effort will fund student scholarships, faculty endowments, information technology enhancements, and other critical needs.

MTU student treated royally by *Home Improvement*

Beth Auffenorde didn't get to be on national television, but she's not complaining.

"She had a great time," said **Jim Schultz,** residential services coordinator. Auffenorde won a trip to California, three nights at a Marriott hotel, and a seat in the *Home Improvement* studio audience in a drawing Schultz sponsored for students who had decided to stay in the residence halls another year.

"Beth did not end up being filmed as part of the 'Tool Time' audience, but she did have front-row seats adjacent to the living room set," Schultz said. In addition, she received several gifts, including an autographed picture, a "Tool Time" hat, and other goodies.

"Beth said they really treated her royally while she was there," he said.

During the episode, star Tim Allen wore a Michigan Tech sweatshirt with the new MTU logotype provided by University Relations. The show will be broadcast on Tuesday, March 30, at 8:00 p.m. on Bresnan Channel 10.

Get rid of all that old stuff now!

The Property Office is planning another surplus property auction for April 10—a perfect opportunity for departments to get rid of all that old stuff laying around and make a few bucks in the process.

But to participate, you must have your list of items for sale to the Property Office by March 19. The list must include a description of each item, tag number, serial number, its condition (excellent, good, fair, poor, scrap), and the building and room in which its located.

As usual, the auction will be held at the Houghton County Arena in Hancock. If you have any questions, call the Property Office, 487-2252.

No *Tech Topics* next week

No *Tech Topics* will be published during the week of March 5. We resume publication March 12. Happy Spring Break!

C^2E^2 grants announced

The Century II Campaign Endowed Equipment Fund Committee has awarded four grants to fund the following projects.

Associate Professor **Pushpalatha Murthy,** through the Department of Chemistry, received $3,750 to support the upgrade of an NMR spectrometer for undergraduate use. The chemistry department provided an additional $6,250.

Professor **David Mendenhall,** through the Department of Chemistry, received $200 to fund accessories to improve a differential scanning calorimeter. The departments of chemistry and physics each contributed $195.

Professor **Bryan Suits** and Department Chair **Bruce Rafert** (physics) received $1,868 to fund an on-campus radio telescope array. The College of Sciences and Arts gave an additional $700, with the physics department providing $1,168.

Assistant Professor **Susan Martin,** through the Department of Social Sciences, and Associate Professor **Charles Young,** through the Department of Geological Engineering and Sciences, received $5,000 to fund a high-resolution magnetometer for non-invasive subsurface investigations. The College of Sciences and Arts, with the social sciences department, contributed an additional $5,840, with the geological engineering and sciences department also providing $5,840.

C^2E^2 funds support small equipment purchases, and proposals may be submitted at any time. For more information, see the Research/Graduate School Web page at http://www.sas.it.mtu.edu/rgs/graduate/c2e2.htm

Correction

The story "Senate Sends Calendar Issue to Its Constituents," which appeared in the February 19 *Tech Topics,* misquoted Provost **Fred Dobney.** It should have said, "The assumption that someone would be dismissed because of their vote impugns the integrity of the administration."

We regret the error.

MichiganTech

Bill Curnow, executive director, University Relations
Marcia Goodrich, *Tech Topics* editor
Gail Sweeting, electronic marketing assistant

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.*

MTU notables

Professor **Edward Fisher** (chemical engineering) has been selected as a member of the Chemical Technology Program Approval Service (CTPAS) subcommittee of the American Chemical Society, which reports to the ACS Society Committee on Education. Fisher received the appointment as a result of his continuing interest and national leadership in chemical technology education.

Graduate student **Krishna Sridharan** (electrical engineering) won first place in the IEEE Power Engineering Society Winter Meeting Student Poster Contest. First prize included a $150 check and framed certificate. Sridharan's poster, "Using Automated Meters for Outage Management," competed with twenty-seven other entries submitted by students from around the world. The work is coauthored by Assistant Professor **Noel Schulz** (electrical engineering).

In print

Associate Dean **Anant Godbole** (sciences and arts) published two papers: "Random Sphere of Influence Graphs in the Lp Metric," with graduate student **Spencer Slade,** in *Congressus Numerantium,* Vol. 134 (1999); and "Successions in Random Tournaments," with graduate student **Papa Sissokho,** in *Congressus Numerantium,* Vol. 135 (1999).

Doing more of what works, part 2

Center for Teaching, Learning, and Faculty Development

Teaching Tips

By William Kennedy, director

In his essay, "Doing What Works: On the Mundanity of Excellence in Teaching," Professor of Sociology Daniel Chambliss argues that improving our teaching is a matter of identifying our current practices and building upon what we presently do that works for students.* Attempts to conform our teaching to some listing of idealized teaching attributes are often futile, according to Chambliss. He argues that evaluation forms and lists of desired practices that favor teachers with outgoing personalities, facile senses of humor, and other personality attributes are difficult, if not impossible, for others to emulate.

Instead, he suggests that teachers embark on a process of analyzing what it is that they already do and then emphasizing those aspects of their teaching that seem to encourage student learning. Such an analysis can begin with a careful review of teaching evaluation forms, especially the student written comment sections. Peer evaluations can also provide secondary suggestions of areas of teaching effectiveness. Chambliss also found that a dozen or so straightforward interviews with former students shed light on his present teaching strengths and weaknesses from a student perspective.

Following the self-analysis, Chambliss suggests that teachers revisit some of their assumptions about college teaching. Many teachers, for example, teach to the "middle of the class," assigning class work and setting standards and the degree of intellectual challenge to the level of the average student. Others adapt by teaching to the bottom of the class, seeing their role as a sort of intellectual evangelism, bringing unengaged students into the fold; a practice, Chambliss asserts, that ultimately results in teacher burnout and frustration. Instead, teachers should take the time to talk to their best students and inquire what they can do to further foster their learning. This approach, he says, will (1) bolster the teacher's enthusiasm, (2) really challenge the middle of the class and encourage them to go beyond their presently self-perceived limits, and (3) potentially awaken the near-dead students and force them to rise to the challenge or realize that it's time to move on.

Chambliss also asserts that teachers really can't motivate students. That door, he wryly observes, is locked from the inside. The key is discovering what ideas and interests already motivate students and adapting our lessons to tap into that intrinsic motivation by weaving essential elements of the course into areas of relevance to the students; an admittedly tall order. I am reminded of the instructional designers facing the challenge of putting together engaging training modules for aggressive young investment bankers. Their solution? Knowing the bankers' penchant for computer games, the instructional designers developed elaborate, highly competitive, visually engaging computer games that required substantial mastery of the identified training outcomes. They learned. They enjoyed it, and it worked!

Teaching improvement, then, is achieved through a process of self-analysis, some steady effort, and the application of a few common-sense principles. Rather than worrying about what excellent teachers do, perhaps we should focus on what we do well and build on our individual strengths.

* Pescosolido, B., and Aminzade, R., Eds., *The Social Worlds of Higher Education: Handbook for Teaching in a New Century,* Pine Forge Press, Thousand Oaks, CA, 1999

Get Tech Topics Sooner! Read us on the web! You can reach us from MTUs home page by clicking on "Tech Topics."

Sign up now for spring rec programs

Have fun and tone up for summer! The Recreation Department is offering a variety of programs for adults and youth during spring 1999.

Adult classes include aikido, swing dance (last chance before summer!), swimming, tennis, scuba, step aerobics, and Aqua FIt.

Youth classes are aikido, swimming, tennis, gymnastics (new—a boys' intermediate class), and Learn to Skate.

For more information, call 487-2975. To register, stop by the Central Ticket Office today!

Colloquium to feature wry research tale

Jeffrey Horn will be the featured speaker at the Joint Colloquium of the Michigan Tech and Northern Michigan math departments. His talk is set for Thursday March 11, 4:00–5:00 p.m., in Fisher 133.

Horn, who is on the faculty of the Department of Mathematics and Computer Science at NMU, will speak on "Long Path Problems." He presents a chronological sequence of anecdotes about an advisor, his students, and their rivals, both domestic and foreign. "This research tale may prove instructive for graduate students, and wryly humorous to faculty," said **Renjang Jiang,** coordinator of the joint colloquium.

All members of the MTU community are invited. For more information, contact Jiang at rjiang@mtu.edu or 487-3359.

On the road

Professor **Sudhakar Pandit** (ME-EM) presented two papers, "Monitoring End-Mill Wear and Predicting Tool Wear Using Accelermeters," coauthored by ME-EM PhD graduate **J. Roth** (Arkansas State University); and "Characterization of Cutting Fluid System Dynamics," coauthored by Professor **John Sutherland** (ME-EM), **Walter Olson** (University of Toledo), PhD student **A. Filipovic,** and MS graduate **H. Gowaiker** (ME-EM), at the 1998 ASME International Mechanical Engineering Congress and Exposition (IMECE) held November 14–23 in Anaheim, California. Also at the IMECE Conference, Sutherland presented "Active Vibration Abatement in a Turning Process by Applying a Magnetostrictively Actuated Tool Holder," coauthored by PhD graduate **D. Liu** (Seagate). Associate Professor **Abdi Majlessi** (ME-EM) presented "Strain Path Effects on Forming Limit Diagram, a Theoretical Approach," coauthored by PhD student **X. Zhu** and Professor **Elias Aifantis** (ME-EM). Assistant Professor **Mahesh Gupta** (ME-EM) presented "Three-Dimensional Simulation of

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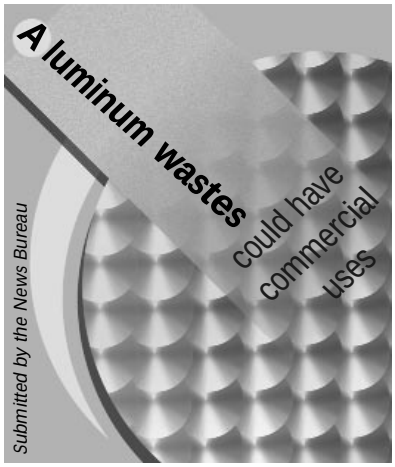

Researchers at Michigan Tech are developing ways to use wastes from the aluminum industry to manufacture a variety of commercially valuable products.

"The aluminum industry produces approximately a million tons of waste by-product from its domestic smelting process, " said **Jim Hwang,** director of the Institute of Materials Processing and an associate professor of mining engineering. "This waste by-product is called salt cake and is skimmed off for disposal during the smelting process. Getting rid of the salt cake costs aluminum producers millions of dollars in landfilling and exposes them to environmental liabilities as well."

Hwang and his colleagues view salt cake not as a waste product but as raw material that, with further processing, can be used to create value-added products to boost the bottom line of the aluminum industry.

"We are developing a technology to divert salt cake into valuable feed stock materials for the manufacturing of concrete products, such as lightweight masonry, foamed concrete, and mine backfill grout," Hwang said. "By using the unique properties inherent in the aluminum salt cake, we can make this by-product function as a foaming (air entraining) agent and as fine aggregate for use in concrete."

Hwang said the new technology will benefit the aluminum, concrete, mining, and construction industries.

"The aluminum industry will improve its competitiveness from increased recovery of aluminum metal and release from its disposal burden and future liability threat," he said. "The concrete industry is facing a growing building construction demand, especially in the lightweight concrete segment, and in the national overhaul of transportation infrastructure. The incoming processed aluminum smelting by-products will not only ease the concrete industry's material supply pressure, but will also improve its productivity by reducing weight and increasing strength, in addition to reducing materials costs.

"The mining industry is under increasing pressure to backfill mines and quarries that are no longer profitable. With foaming concrete, the mines and open pits can be filled with half the amount of cement used with standard concrete. And the construction industry is looking for alternative building materials due to fluctuating lumber prices and the sagging quality of lumber. Cellular, lightweight concrete products can fill the bill as an economically feasible alternative."

The project pulls together researchers from the University and industry to ensure that the outcome is technically, economically, and environmentally sound and applicable to industry needs. Several departments will be involved, along with industry representatives from Alcan, IMCO Recycling, Marport Smelting, TIMCO, Master Builders Inc., Besser Company, Golder Associates, Inc., and Down Stream Systems Engineering.

The four-to-five year project will be supported by a $1.6 million contract from the Department of Energy and $400,000 from industry.

News you can use

How to disagree with your boss

An occasional difference with your boss is neither uncommon nor job threatening. It may even be an opportunity, as long as it is addressed properly. Here are five strategies for effectively getting your views heard:

1. Wait until the timing is right. Common sense will help you determine the best time to express a concern. Don't bring a problem to your boss when either of you is tired, angry, rushed, or preoccupied. Another bad time is immediately after you have made a mistake.
2. Keep it private. Take your disagreement directly to your boss. Do not discuss it with your co-workers. Complaining to others may get you sympathy, but it won't provide a solution and can make the situation worse if your boss hears about the issue through the grapevine instead of from you.
3. Get right to the point. Address your concerns directly, without long lead-ins, apologies, or excuses.
4. Voice your opinions constructively. Outline the issues and offer solutions. Your boss may not realize the problem exists unless you point it out.
5. Agree to disagree. Point out to your boss that it's important for you to be able to take your concerns to him or her, even when you may have a difference of opinion.

Taking the time to tell your boss you don't agree with a policy, procedure, or decision tells your boss that you care about the University. And sharing your concerns with a solution in mind will stand you in good stead.

Proposals in progress

Researchers, their proposals, and their potential sponsors are

- **Alex Mayer** (geological engineering and sciences), Geoff Thyne (Colorado School of Mines), and Janice Gillespie (CSU Bakersfield), "Collaborative Research: A Multidisciplinary Approach to Determine the Controls on a Right-Lateral Reverse Fault in an Alluvial Aquifer," NSF
- **Komar Kawatra** and **Timothy Eisele** (MME), "An Economical Process for Removal of Carbon Dioxide from Flue Gas," U.S. DOE
- **David Flaspohler** (SFWP) and John Probst (USFS), "Establishing a Conservation Strategy for the Openlands Avifauna in the Upper Peninsula: The Rationale for a Multiscale," Michigan DNR
- **Ching-Kuang Shene** (computer science), "Building an Interactive System and Kernel Library for Curve and Surface Design," Michigan REF
- **Donald Mikkola** (MME), "New Composite Coatings for Protection Against Oxidation, Wear, and Abrasion," NSF
- **David Reed, Margaret Gale, Glenn Mroz** (SFWP), "Proposal to Conduct Three Sessions of USDA Forest Service Pass Program," USFS
- **Drew Pilant** (physics) and **Margaret Gale** (SFWP), "Using Spaceborne Optical and Synthetic Aperture Radar Imagery for High-Resolution Wetlands Inventory and Landscape Analysis," Michigan Space Grant Consortium
- **Glen Simula** (KRC), "Artificial Aging of Automotive Elastomer Mounts," Michigan REF
- **Blair Orr** (SFWP), "Using Capital Turnover Rates to Improve Implementation of Industrial Regulation," Michigan Great Lakes Protection Fund
- **Blair Orr** and **Jim Pickens** (SFWP), "Identifying Economic Values of Protected Areas Along Michigan's Lake Superior Shoreline," Michigan DEQ
- **Kristine Bradof** (GEM Center), "A 'Safe Water First' Resource-Based Planning Demonstration and Dissemination Strategy for Michigan's Western Upper Peninsula," U.S. EPA
- **Bruce Stribling** (electrical engineering), "Maui Space Surveillance System Intergovernmental Personnel Act," Department of Defense
- **Mark Osborne, Jay Meldrum** (KRC), **John Johnson,** and **Harold Evenson** (ME-EM), "Program Development and Capacity Building for the KRC Dynometer Facility," Michigan REF
- **Jiann-Yang Hwang** (mining engineering), "Properties of Unburned Carbon from Fly Ash and Its Relation to Mercury Adsorption," DOE
- **Bruce Seely** (social sciences) and **Mark Plichta** (engineering), "Subcontract/Engineering—Humanities 2002," NEH/NSF
- **James Vallance** (geological engineering and sciences) and Bruce Houghton (University of Hawaii), "The AD 260 Eruption at Lake Ilopango: A Complex Explosive Eruption through a Caldera Lake," NSF
- **Mark Gockenbach** (mathematical sciences), "Collaborative Research: Large-Scale Optimization—Matrix-Free Algorithms, Data Parallelism, and Applications in Seismic Inversion," NSF
- **Gregg Bluth** and **Richard Cookman** (geological engineering and sciences), "Hydrologic and Geochemical Monitoring and Analysis of Three Watersheds Draining Michigan's Keweenaw Peninsula into Lake Superior," University of Michigan/Michigan Space Grant Consortium
- **Edward Lumsdaine** (ME-EM) and **Jon Henkel** (general engineering), "E-Teams in GN150 Course and CIRT Student Group," NCIIA
- **Carl Blair** and **Patrick Martin** (social sciences), "Smelt/Low Birker," NSF
- **Joan Schumaker Chadde** (civil and environmental engineering) and **David Flaspohler** (SFWP), "Amphibian Malformation Survey of Western Upper Peninsula Using Middle/High School Classes," MDNR
- **Anant Godbole** and **Brenda DeBlois** (mathematical sciences), "Girls Working with Astronomy," Michigan Space Grant Consortium
- **William Rose** and **Colleen Riley** (geological engineering and sciences), "Quantitative Characterization of Volcanic Ash Particle Shape to Improve Remote Sensing Algorithms and Transport Modeling," Michigan Space Grant Consortium
- **Shalini Rudak** and **John Lehman** (Educational Opportunity), "Women and Minorities in Engineering Groups Projects," "American Indian Workshop," and "Summer Youth Program—Space Science Exploration," Michigan Space Grant Consortium

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On the road

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Microchip Encapsulation Process," coauthored by graduate student **R. Han** (ME-EM). Filipovic presented "Characterization of Cutting Fluid System Dynamics," coauthored by Sutherland, Pandit, Olson, and MS graduate **H. Gowaiker** (ME-EM).

Visiting faculty member **Soumitra Basu** (ME-EM) made a presentation, "Waste Reduction in Machining Processes," submitted by Professor **John Sutherland** (ME-EM) at the Region 5 Environmental Protection Agency Conference held December 14–15 in Chicago.

Associate Professor **John Jaszczak** (physics) gave an invited seminar, "Surprising Graphite from Ontario and Ukraine," on February 11 to the Department of Geology and Geophysics at the University of Wisconsin–Madison.

The electrical engineering department's power program had a large group participate in the IEEE Power Engineering Society Winter Meeting, held January 31–February 4 in New York City. Four faculty attended, along with three graduate students and seven undergraduates who were sponsored by the NSF travel program. Six of the students presented the following posters: graduate student **Govind Gopakumar,** "Relay Testing Using Nonlinear Models for CTs and CCVTs," advisor Associate Professor **Bruce Mork**; graduate student **Krishna Sridharan,** "Using Automated Meters for Outage Management," advisor Assistant Professor **Noel Schulz**; graduate student **Mrudhula Lakkakula**, "Using Intelligent Distribution Automation for Effective Restoration During Storms," advisor Schulz; undergraduate **Rochelle Fischer,** "Improved Restoration of Ice Storm Outages Using Automated Meters," advisor Schulz; undergraduate **Chris Middlebrook,** "Educational Case Study on Power System Blackout Restoration," advisor Schulz; undergraduate **Michael Skowronek,** "Modeling Automated Meters for Outage Management Using EPRI's Common Information Model (CIM)," advisor Schulz. Mork helped organize and lead a day-long tutorial, "Power System Overvoltages, Analysis, Modeling, and Case Studies," and taught a section, "Computer Modeling of Transients." Associate Professor **Leonard Bohmann** chaired the meeting of the Power Engineering Education Committee (PEEC) subcommittee on University Education. Professor **Dennis Wiitanen** chaired the meeting of the PEEC subcommittee on Strategic Planning. Schulz chaired the meeting of the PEEC subcommittee on Power Engineering Career Promotion and was session moderator for a panel discussion, "Outage Management Techniques and Experiences."

Professor **Sudhakar Pandit** (ME-EM) presented a paper, "Condition Monitoring and Failure Prediction for Various Rotating Equipment Components," coauthored by ME-EM PhD graduate **J. Roth** (Arkansas State University), at the International Modal Analysis Conference XVII held February 4–12 in Kissimmee, Florida. Also at the conference, graduate student **William Braun** (ME-EM) presented a paper, "The Development of Machine-Tool Force Reconstruction for Wear Identification," coauthored by Assistant Professors **Michele Miller** and **John Schultze** (ME-EM).

Assistant Professor **Rudy Luck** (chemistry) gave a seminar, "Rhenium Hydride Complexes: The Case for a Long H...H Interaction," on February 12 for the Northern Michigan University chemistry department.

February

BLACK HISTORY MONTH

24 Wednesday

1:00 p.m.—Emily Puckette, "Critical Exponents and Random Walks"—Fisher 101

25 Thursday

noon—Lunch and learn, "Developing and Nurturing Assets in Your Children"—Memorial Union 105B

10:00–11:30 a.m.—Open House—Michigan Tech Child Care Center

3:00 p.m.—Emily Puckette, "Two Approaches to Curricular Change"—Fisher 101

26 Friday

7:35 p.m.—Hockey, Nebraska-Omaha at MTU—MacInnes Student Ice Arena

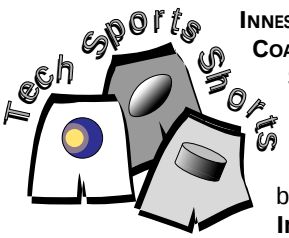
27 Saturday

10:00 a.m.-5:00 p.m.—Family Fun Day—SDC, Memorial Union

7:05 p.m.—Hockey, Nebraska-Omaha at MTU—MacInnes Student Ice Arena

Proposals (Continued from page 4)

- **Gretchen Janssen** and **Shalini Rudak** (Educational Opportunity), "Secondary Educators' Fellowship and Elderhostel," Michigan Space Grant Consortium
- **Judith Wells Budd** (geological engineering and sciences), "Remote Sensing of Great Lakes Water Quality Using SEAWIFS (Sea-Viewing Wide Field-of-View Sensor) Imagery," Michigan Space Grant Consortium
- **Julia King** (chemical engineering), "Determination and Modeling of Synergistic Effects of Carbon-Based Conductive Fillers for Electrically and Thermally Conductive Resins," NSF
- **David Sikarskie** and **Todd Irlbeck** (ME-EM), "Numerical and Experimental Investigation of Torsional Instabilities in Lightweight Aluminum Stepladders," Michigan Space Grant Consortium
- **Judith Budd** (geological engineering and sciences) and **Rick Carter** (BGSU), "Using Remotely Sensed Imagery to Detect the Areal Extent of *Cladophora glomerata* in Platte Bay, Michigan," Michigan Space Grant Consortium
- **Judith Budd** (geological engineering and sciences) and **James Chye** (physics), "Automated Edge Detection for Remotely Sensed Imagery," Michigan Space Grant Consortium
- **Dennis Johnson** (civil and environmental engineering) and **Ann Mclean** (SFWP), "Development of GIS Data Layers for Improved Flash Flood Guidance Estimates," National Weather Service
- **Donna Michalek** (ME-EM), "POWRE: Assessing the Effectiveness of CFD in Simulating the Flow of Cutting Fluids During Machining Processes," NSF
- **Rolf Peterson** (SFWP), "Multi-Trophic Level Dynamics of Wolves, Moose, and Vegetation at Isle Royale" and "Wolves in Yellowstone: Multi-Trophic Level Responses to the Addition of a Top Carnivore," NSF



Submitted by Dave Fischer, athletic communications director/assistant athletic director

INNES NAMED GLIAC COACH OF THE YEAR, SORENSON ON ALL-GLIAC TEAM

First-year women's basketball coach **Darla Innes** has been named the GLIAC Coach of the Year, and junior forward **Jenny Sorenson** has been named to the All-GLIAC North Division first team. Junior forward **Clara Goggins** has been picked on the All-GLIAC North second team as well as the All-GLIAC North Division All-Defensive Team. Senior center **Janalee Rondorf** is also a North Division All-Defensive Team pick.

Innes led the Huskies to a 24–2 season record, including a 17–2 conference record. The Huskies won the North Division title and earned the number-one seed in the February 24–27 Conference Tournament. Sorenson led the Huskies in scoring and ranked seventh in league scoring to repeat a First-Team North berth. Goggins has repeated as a Second-Team pick and an All-Defensive Team selection. She was named GLIAC Player of the Week for the week of February 15.

SORENSON NAMED GLIAC PLAYER OF THE WEEK

Sorenson has been named GLIAC Player of the Week for her play last week in two victories that helped the Huskies claim the conference's best record. Sorenson scored 44 points in 50 minutes as the Huskies won at Northern Michigan, 81–66, and at home against Lake Superior State, 81–58. She scored 19 points against NMU and a season-high 25 points against LSSU.

SEGAL RESIGNS AS VOLLEYBALL COACH

Alan Segal, head coach of the MTU women's volleyball team for the past two seasons, has resigned to accept a similar position at Armstrong Atlantic State in Savannah, Georgia.

Segal led MTU to a 40–32 overall record in two seasons, including an NCAA Tournament berth in 1997.

"We appreciate Alan's efforts and certainly wish him the very best in his new endeavor," Athletic Director **Rick Yeo** said.

Segal's last day at Michigan Tech is February 26. He begins his new duties at Armstrong Atlantic on March 1.

A national search for a replacement is underway, and no timetable has been set for naming Segal's replacement.

MTU COULD HOST NCAA REGIONAL

Michigan Tech's women's basketball team could host the six-team NCAA Division II Great Lakes Regional Tournament, set for March 5–7.

The Huskies, currently ranked second in the region, are a virtual lock to be one of the six teams chosen to participate in the Great Lakes Regional. The bigger question is if they will host the event. That answer will come Sunday, February 28, via the NCAA II Women's Basketball Selection Show, which will be aired live on WBKP-TV at 6:00 p.m.

Should the Huskies be chosen to host the Great Lakes Regional, tickets will go on sale at 9:00 a.m. on Monday, March 1 for MTU basketball season ticket holders; they will have until the end of the day Wednesday, March 3, to purchase their seats. Any season ticket holder seats not purchased by March 3 will be sold on a first-come, first-serve basis beginning Thursday, March 4, at 8:00 a.m.

Ticket prices will be $7 for reserved seats, $5 for general admission, and $4 for all students.

MICHIGAN TECH FUND POSITION AVAILABLE

The Michigan Tech Fund is accepting applications for the following position:

Research Assistant—Prospect Research

For more information, call 487-1930. To apply, send a resume to the Michigan Tech Fund. Resumes will be accepted until March 5, 1999.

New staff

Mary Marchaterre has joined the IT staff as an analyst programmer. She previously worked as a tech lead with the Peoplesoft student administration financial aid module at the University of Michigan. Marchaterre has a BA in Mathematics from the University of Delaware, is married to Research Professor **David Nitz** (physics), has a son, Alexander Nitz, and lives in Houghton. Her hobbies are sailing and cross-country skiing.

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.