

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

~ GOOD NEWS ~

May 2001

College News

The Department of Physics and Astronomy is pleased to announce that the second annual **PHYSICS SHOW** will be held in Trafton C121 on May 1 from 7:00 - 8:00 p.m. This is a new and improved show. The crowds will be wowed with entertainment by physics and astronomy faculty, using principles of physics in exciting ways. The name of this year's show is "Rainbows, Color, Zaps, and Other Neat Stuff." On behalf of the College of Science, Engineering and Technology you are encouraged to attend and to bring young guests with you. In an effort to invite elementary aged children from District 77, fliers were sent to all students. Last year we had a nice crowd and expect an even bigger crowd this year. Refreshments will be served after the presentation.

The College of Science, Engineering and Technology will celebrate with over 120 scholarship recipients at the 2001 CSET Scholarship Reception on May 1, from 3:00-5:00 in the Centennial Student Union Ballroom. Mr. Dennis Siemer, President and CEO of V-Tek will be the guest speaker at the reception. All faculty, staff and students are welcome to attend the event. We are very proud of these students and also the donors who make the scholarships available and possible for our students. This is quite a celebration of excellence and this year, for the first time, several outstanding faculty and staff persons will also be recognized for their contributions to the college.

The 2001 Northern Lights Solar Car was publicly unveiled on April 19 during a luncheon hosted by the Solar Car Team and the College of Science, Engineering and Technology. The unique partnership between MSU's Marketing Club and the Solar Car Club resulted in a most professional presentation. The event attracted several hundred supporters and media personnel. The car itself is completely redesigned for the 2001 season. The shell was manufactured by the team at Winona State University. Student team members from MSU have designed the chassis and mechanics. The car and team heads to Topeka, Kansas for a lap race qualifier in early May and then on to the Sunrayce along Route 66 in July. President Rush intends to meet the car at the race end in Long Beach, California. His parting shot to the team was, "bury those Gophers!"

We had a very successful Junior/Senior High Science & Engineering Fair on March 3. The activities were in the Centennial Student Union and Morris Hall buildings here on campus. From southern Minnesota there were 351 student participants with projects and 79 students with research papers. We had 218 volunteer judges!

Seventy-nine students with projects and 18 students with research papers will advance and participate at the Minnesota Academy of Science State Science Fair to be held in Rochester, MN on April 20-22. Eight students won the expense-paid trip to the Intel International Science & Engineering Fair (ISEF) to be held in San Jose, CA on May 6-12. Again, one of these eight is Muhammad Abdul Ali, son of Muhammad Khaliq from our ECET Department.

Thin Film Technology Corp. contributed \$5,000 this year, which includes one-half of the expense of all the ribbons, trophies, books and medallions that we award. They will also sponsor Muhammad for his trip to ISEF. NorAm/Minnegasco Foundation contributed \$2,875 this year, which includes all the cash awards for the South Central region. V-TEK Inc. contributed \$5,000 and Hickory Tech will be contributing \$1,000. These contributions and the additional ones from individual people and companies are notably important.

The College of Science, Engineering and Technology co-sponsored the presentation by NASA Astronaut John D. Olivas, on April 25, 2001. This presentation was co-sponsored with the Chicano/Mexicano & Latino Affairs program. Dr. Thomas Hendrickson gave the visiting students tours of the Science, Engineering and Technology laboratories and classrooms of the Trafton Science Center and Wissink Hall.

As in years past, the College of Science, Engineering and Technology has participated in the annual Undergraduate Research Conference, which took place on April 3, 2001. Our College is blessed with many dedicated, talented and caring faculty who are always willing to help our students. Many of these faculty have served as mentors to the students who participated in this Conference. We want to acknowledge and thank those faculty who were involved this year: Alison Mahoney, Elaine Hardwick, Lou Schwartzkopf, Bryce Hoppie, Kirk Ready, Ann Quade and Mahbubur Syed.

Department News

BIOLOGY

Dr. John D. Krenz sends news of a recent publication in Minnesota Waterfowler 33:10. The title of his article is "Macroinvertebrates decline in Swan Lake."

Dr. John D. Madsen, Department of Biological Sciences, sends along the following news about his journal publication: Madsen, J.D., H.A. Crosson, K.S. Hamel, M.A. Hilovsky, and C.H. Welling. Panel Discussion: Management of Eurasian watermilfoil in the United States using native insects: State regulatory and management issues. *Journal of Aquatic Plant Management* 38:121-124. Also, Dr. Madson has the following report in press: Getsinger, K.D., A.G. Poovey, J.G. Skogerboe, T.J. Koschnik, J.D. Madsen, R.M. Stewart, D.R. Honnell, and A.G. Staddon. 2001. Small Plot Treatments of Triclopyr for the Selective Control of Eurasian Watermilfoil. Technical report ERDC/EL TR-01-X, US. Army Engineer Research and Development Center, Vicksburg, MS. In press.

Dr. Keith Klein, Department of Biological Sciences, announces the publication of a book chapter: Klein, Keith K. and James C. Correll. Vegetative compatibility group diversity in *Fusarium*. In: *Fusarium*: Paul E. Nelson Memorial Symposium, B.A. Summerell, J. F. Leslie, D. Backhouse, W.L. Bryden, and L. W. Burgess, eds. APS Press, St. Paul, Minnesota, 2001.

Jeff Gilbert (graduate student) and Dr. Penny Knoblich presented their research on exercising hypertensive rats at the Northland Chapter of the American College of Sports Medicine in Minneapolis last month, and placed 5th out of 23 abstracts presented from colleges as far away as Nebraska and Ontario, Canada.

CHEMISTRY AND GEOLOGY

Students in Chemistry 495, Senior Seminar presented the results of their research during a poster session held on Thursday, April 26. Thirteen students presented posters based on library, laboratory and industrial research.

COMPUTER AND INFORMATION SCIENCES

Mike Wells received the Flies Fellowship and will be working with Hickory Tech and examining their software testing procedures. This knowledge will be incorporated into the Application Programming curriculum.

Dr. Mahbubur Rahman Syed from the Department of Computer and Information Sciences has just accepted an invitation to serve as the PROGRAM CHAIR of the ICSEE'02: "International Conference on Simulation and Multimedia in Engineering Education" conference next year. The conference will be held during January 27-31, 2002 in San Antonio, Texas, USA. It is an annual international conference organized by "The Society for Computer Simulation International" (<http://www.scs.org/>) as a part of the Western MultiConference of Computer Simulation (WMC).

Professor Syed is also involved in organizing as the chair of the Multimedia Computing and Information Management track of the IRMA 2001 International conference to be held during May 20-23, 2001 at the Toronto Marriott-Eaton Hotel, Toronto, Ontario Canada (<http://krypton.mankato.msus.edu/~syedm/irma2001/>, <http://www.irma-international.org>).

Dr. Syed also has coauthored two papers accepted for presentation at the IRMA 2001 International conference to be held during May 20-23, 2001 at the Toronto Marriott-Eaton Hotel, Toronto, Ontario, Canada and for publication in the proceedings of the Conference. The title of one paper is 'Fast Encryption for Multimedia by Xun Yi, Chik How Tan, Chee Kheong Siew and Mahbubur R Syed (coauthors are from Singapore). The title of the other paper is A Linguistically Sortable Bengali Coding System And Its Application In Spell Checking: A Case Study Of Multilingual Applications by M. Manzur Murshed, Mahbubur R Syed, M. Kaykobad (coauthors are from Australia and Bangladesh).

MATHEMATICS AND STATISTICS

Dr. Francis T. Hannick, Math & Stats, presented a workshop on "Hands-on Experience with Numerous Activities for the Elementary School Mathematics Curriculum" at the annual meeting of the National Council of Teachers of Mathematics in Orlando, FL on April 6.

Dr. Namyong Lee presented a research talk "On the Superconvergence of Discontinuous Galerkin Methods" at Math Assoc. of America's 2001 Spring section meeting.

One of our Math students, Zaki Mohammad, was selected for a NSF funded REU program for summer 2001. Zaki will work at the University of Minnesota for his summer research on Number Theory and Cryptology.

Drs. Larry Pearson and Mezbahur Rahman have a joint paper accepted for publication, the reference is: Rahman, Mezbahur and Larry M. Pearson (2001). "Estimation in Two-Parameter Exponential Distributions", Journal of Statistical Computation and Simulation, Volume 00, pp. 1-16.

PHYSICS AND ASTRONOMY

Three majors in the Department of Physics and Astronomy have been accepted into highly competitive REU programs (Research Experience for Undergraduates) this summer: Adam Johnson, at the University of Wisconsin, Madison; Jeff Burkett, at Iowa State University; and Steve Dwyer, at Pennsylvania State University.

Steven Kipp, Astronomy, has been awarded a \$10,000 grant for the purchase of a CCD (charge-coupled device) camera, to be used at the Andreas Observatory for student projects.

Adam Johnson, a physics major, presented a paper at the Undergraduate Research Conference, titled "Effects of Tantalum on Properties of Nb₃Sn Wires."