

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY
~ GOOD NEWS ~
I April 2001

College News

The College of Science, Engineering and Technology is proud to be a cosponsor of the upcoming presentation by NASA Astronaut John D. Olivas. Mr. Olivas will be speaking on April 25, 2001. This presentation is cosponsored with the Office of Chicano/Mexicano & Latino Affairs. All college faculty, staff and students are encouraged to attend. Details on time and location will be announced soon.

The annual Order of the Engineer banquet will take place on Thursday, April 12, 2001. During the event, senior electrical and mechanical engineering students will take the "Oath of the Engineer" in preparation for induction into the Minnesota Society of Professional Engineers. The guest speaker will be Mr. Bob Jarvis representing M.S.P.E.

The Department of Physics and Astronomy is pleased to announce the first annual PHYSICS SHOW will be held in Trafton C121 on May 1 from 7:00 – 8:00 p.m. This year the show is new and improved. The crowds will be wow-ed 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

Department News

AUTOMOTIVE AND MANUFACTURING ENGINEERING TECHNOLOGY

Seventeen Automotive Engineering Technology majors competed in the Society of Automotive Engineers Clean Snowmobile Challenge held March 24-31, 2001, in Jackson Hole, Wyoming. Some of the events were also held in the Yellowstone and Grand Teton National Parks. The Minnesota Department of Commerce and the Minnesota United Snowmobile Association provided primary funding.

Thirteen other U.S. and Canadian universities also competed; Colorado State University, Colorado School of Mines, Michigan Technological University, University of Waterloo, University at Buffalo-SUNY, University of Idaho, University of Alberta, Clarkson University, Kettering University, University of Wyoming, University of Alaska-Fairbanks, University of Kansas, Western Washington State University.

MSU's snowmobile featured a direct injected (1000 PSI) fuel system and 500cc two stroke cycle engine in a 2001 Polaris Edge chassis. A 10% ethanol, 90% gasoline fuel along with a catalytic converter was used to reduce emission

levels. Other components of the competition included noise, oral presentation, technical report, and cost analysis.

MSU's student team placed fourth overall and received \$2000 in prize money. In addition to the overall award, the team had the following individual event results: 1st - Handling; 1st (tie) - Cold Start; 2nd - Hill Climb; 3rd - Fuel Economy (17.4 MPG, 16% better than stock); 4th - Emission (with an 80% reduction from stock); 4th - Acceleration; 4th - Static Display. As a result of their accomplishments, MSU's students will present their technical design paper next September in San Antonio, TX, at the Society of Automotive Engineers Fuels and Lubricants Conference.

BIOLOGY

Dr. John Madsen has been busy this past month with several presentations in Wisconsin. Professional Presentations included: Madsen, J.D. Ecological impacts of aquatic plant management techniques. Invited Speaker, Aquatic Ecosystem Restoration Foundation Symposium; Wisconsin Lakes Convention, 9-10 March 2001, Stevens Point, WI. Also: Madsen, J.D. Selective control of submersed plants using herbicides. Invited Speaker, Aquatic Ecosystem Restoration Foundation Symposium; Wisconsin Lakes Convention, 9-10 March 2001, Stevens Point, WI.

Dr. Madsen also sends word of a report: Madsen, J.D. 2000. Advantages and disadvantages of aquatic plant management techniques, US Army Engineer Research and Development Center Miscellaneous Publication ERDC/EL MP-00-1.

Dr. Beth Proctor sends the following good news. The Environmental Quality Laboratory ranked 31 out of 234 certified labs participating in the APG blind performance panel. The EQL also ranked #2 for orthophosphorus as P, and conductivity and ranked #8 for total Phosphorus as P.

Dr. Michael Bentley, Professor in the Department of Biological Science was an author in the following papers: Ortiz MC, Garcia-Sanz A, Bentley MD, Fortepiani LA, Garcia-Estan J, Ritman EL, Romero JC (2000) "Micro-computed tomography of kidneys during early renal dysfunction induced by chronic bile duct ligation". *Kidney International* 58:1632-1640.

Bentley MD, Jorgensen SM, Garcia-Sanz A, Garcia N, Ortiz MC, Romero JC, Ritman EL (2000) "Visualization of renal vascular and tubular structures by microcomputed tomography". *National Synchrotron Light Source, 1999 Activity Report, Science Highlight Article* 2-38 thru 2-40.
(<http://nslsweb.nsls.bnl.gov/pubs/actrpt/1999/2bio.pdf>)

COMPUTER AND INFORMATION SCIENCES

Steven Case sends good news related to the WAP server: "We have received and installed the hardware and software for the WAPGateway donated by Nokia. The gateway provides the College the capability to support student and faculty research in the

development of applications for the wireless web. In addition, the gateway will be used to support collaborative research in wireless protocols with graduate students and faculty at the University of Helsinki, Finland.”

Case also has authored a paper that has been accepted for presentation at the ICIMADE '01 Conference and will be published in the conference proceedings. The paper is titled "Bluetooth Protocol Simulation with IP-Multicast – Supporting Distance Education for Personal Wireless Protocols".

CONSTRUCTION MANAGEMENT AND INTERIOR DESIGN

Interior Design Associate Professor, C. Michael Lindstrom, brought a record 110 students on a tour to the Minneapolis Art Institute and the International Market Square on Thursday, March 22. The Baker Furniture Showroom executive noted: "You can always tell they are MSU interior design students because they look professional."

On Friday, March 23 the Construction Management Program and the law firm of Faegre and Benson LLP cosponsored a seminar on "Technology in Construction: E-Commerce and Web-Enabled Project Management." It was held at the IDS Center, Minneapolis. A record 128 people were in attendance including architects, engineers, contractors, project owners, technology providers, construction lawyers, and MSU students.

MATHEMATICS AND STATISTICS

Dr. Pavel Kitsul, Assistant Professor of Mathematics and Statistics, received two grants (approximately \$3,000) from the University of Padua (Italy) and the Italian National Research Council (analog of the US National Science Foundation) to visit the Departments of Pure and Applied Mathematics and Biology of the University of Padua (Italy) to deliver a series of lectures in statistics to the undergraduate students of biology and in statistics of random processes to the Ph.D. students of mathematics and faculty, and to participate in a research project of the Italian National Research Council (May - July 2001).

PHYSICS AND ASTRONOMY

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