

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY JANUARY 2004

GOOD NEWS

BIOLOGICAL SCIENCES

Dr. Steve Mercurio, Professor, and his student, Mr. Eddie Kalombo, were accepted to go to the Society of Toxicology meeting in Baltimore, Maryland on March 20-22, paid fully by the Society of Toxicology. Mr. Kalombo was accepted as one of 30 students nationwide to be part of the Undergraduate Education Program for Minority Students. Dr. Mercurio was accepted as one of 10 advisors nationwide. Dr. Betty Eidemiller, of the Society of Toxicology, indicated that this was a highly selective process.

Mr. Kalombo wrote a grant that was accepted for funding by the Department of Biological Sciences and is entitled "Determination of liver and gill pathogenesis of 17alpha-ethynylestradiol as a function of vitellogenin concentration and reversal by tamoxifen in the Rainbow Darter (*Etheostoma caeruleum*)." This research will be presented this coming April at the Undergraduate Research Symposium here at MSU.

Dr. Brock McMillan and his graduate student, Thomas Gorman, received an equipment grant from Sandpiper Technologies Inc. for their proposal entitled, "Female behavior, neonate survival, and natal den site characteristics of the river otter in southeast Minnesota." Approximate value of the equipment grant is \$3,600.

Dr. McMillan has accepted the position of Associate Editor for *The Prairie Naturalist*. *The Prairie Naturalist* publishes results from original research on the ecology of the Great Plains.

ELECTRICAL AND COMPUTER ENGINEERING AND TECHNOLOGY

Dr. Ed Doering met with Allan Bohlke (MSU alum, 1986, Chemistry) and Jason Bender at the 3M Corporate Research Analytical Laboratory in St. Paul to assist with a feasibility study on behalf of the Electric Power Research Institute (EPRI). The study established the degree to which X-ray fluorescence spectrometry (XRF) would be successful as a field-deployable instrument for predicting the remaining life of turbine blades in gas turbines.

On the same trip Dr. Doering also met with Tim Skunes, Director of Product Development at CyberOptics Corporation in Minneapolis to discuss areas of potential collaboration for research and student projects. CyberOptics manufactures equipment to do high-speed video-based inspection of surface-mount circuit boards.

Dr. Doering also discussed areas for research collaboration with Joe Gray and Terry Jensen, two research scientists specializing in X-ray techniques for nondestructive evaluation (NDE) at Iowa State's Center for NDE in Ames, IA.

INTERIOR DESIGN AND CONSTRUCTION MANAGEMENT

The Pella Window Company has agreed to sponsor a competition for Interior Design students who are enrolled in the ID Lighting and Color course. Pella will donate a total of \$500 to the winners of the competition, "The Making of a Place with Light." Each student in the course will make a collage or a three-dimensional model which will represent the effects of natural light on color. Their work will be graded as a class project and will also be submitted for judging to a panel of MSU faculty and representatives of Pella Windows. This project will become part of the students' portfolio. This project was initiated by Mr. Farid Sabongi, the course instructor.

MATHEMATICS AND STATISTICS

A paper entitled "Tests for Uniformity: A Comparative Study" authored by Mezbahur Rahman and Shuvro Chakrobartty has been accepted for publication in the *Journal of the Korean Data & Information Science Society*, Volume 15, Number 1 (February 28, 2004).

MECHANICAL AND CIVIL ENGINEERING

Ryan Sutherland, junior in Civil Engineering, has been awarded a \$1500 scholarship for 2004-2005 from the American Council of Engineering Companies in Minnesota. This is the third scholarship Ryan has received from the professional organizations. This year he is the recipient of the City Engineers Association of Minnesota Scholarship and the Minnesota Chapter of Public Works Association Scholarship.

Dr. Karen Chou, Associate Professor of Civil Engineering, has just published a paper, "Crack growth life model for fatigue susceptible structural components in aging aircraft", in the *International Journal of Structural Engineering & Mechanics*, Vol. 17, No.1 (2004): 29-50. The paper was co-authored with her former graduate and undergraduate students from the University of Tennessee.

Dr. Deborah Nykanen, Assistant Professor of Civil Engineering, has been awarded the following grants: "Investigation of topographic influences on space-time scaling of orographic precipitation", sponsored by NASA in the amount of \$86,000. The second grant is "Use of Climate Forecasts in Multipurpose Reservoir System Management", sponsored by NOAA as subcontract through Michigan Technological University in the amount of \$26,500.

In January, Dr. Nykanen presented a paper entitled "Orographic and Meteorological Influences on the Space-Time Scaling of Convective Precipitation" at the 2004 American Meteorological Society Annual Meeting in Seattle, WA.