

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

APRIL 2006
GOOD NEWS

BIOLOGICAL SCIENCES

Dr. Brock McMillan, Associate Professor, received a grant for \$54,561 from the Minnesota Department of Transportation for his project entitled, "The influence of roads on movements of wildlife; do mitigation efforts work?"

CHEMISTRY AND GEOLOGY

Dr. John Thoemke and Dr. Marie Pomije were notified that their invited submission to the Symposium entitled *National Science Foundation Catalyzed Innovations in the Undergraduate Chemistry Curriculum* to be held during the American Chemical Society National Meeting in September 2006, in San Francisco, CA was accepted.

Dr. Jeff Pribyl, Professor, participated in *Common X-Change*, a short term partnership program that brings together teachers, scientists and students to do experimental science in the classroom. He was partnered with Vernon Cardwell from the University of Minnesota to work with Patti Davis and Irene Brink, both first grade teachers at Frost Lake Elementary School in St. Paul.

Seven faculty and three undergraduate students from the Department of Chemistry and Geology traveled to Atlanta, GA to attend the 231st National Meeting of the American Chemical Society held during March 25-30. Several presentations were made and are noted below. Presenting student authors are italicized while presenting faculty authors are underlined. Unless otherwise noted, co-authors are undergraduates majoring in chemistry at MSU.

Rachel Burkhardt and Dr. Marie Pomije "Study of platinum vapo-chromic complexes" Rachel's poster was well attended and Dr. Pomije received numerous complements from colleagues on Rachel's work and presentation.

Rena Haycraft, Heidi Bednar, Dr. Bryce Hoppie, Dr. Dan Swart, and Dr. Trent Vorlicek "Enhancing the undergraduate experience through field-based research in environmental geochemistry". Rena and Heidi will graduate with BS degrees in chemistry from MSU in May 2006. Heidi will be attending the University of Iowa next fall as a Ph.D. candidate in analytical chemistry.

Dr. Brian L. Groh, Jason F. Pendleton, Mariya Nasiruddin, and Duane M. Anderson "Greening of organic chemistry lab experiments: A stepwise transition". Co-author Duane M. Anderson is a 2005 MSU chemistry teaching graduate and co-author Mariya Nasiruddin is a 2005 MSU biology graduate.

Dr. Brian L. Groh, Joseph Bequette, and William Gilles "Simple and effective removal of triorganotin halides from reaction products". Co-author William Gilles is a 2005 MSU chemistry graduate.

Dr. Jeffrey R. Pribyl, Ian J. Lulich, and Michelle J. Taylor "Changes in student's self-efficacy and success in a general chemistry course". Ian and Michelle will both graduate this spring as double majors with degrees in biology and chemistry.

Patricia L. Rambo and Dr. Jeffrey R. Pribyl “Results of a three-tier multiple choice instrument on molecular shape and bonding with students' success”

Dr. John D. Thoemke, Alex Blom, and Dr. Kristopher McNeill “NOM-sensitized singlet oxygen production: Correlations with NOM excitation-emission spectral features and molecular size”. Co-author Alex Blom is a 2005 MSU chemistry graduate. The work was conducted in collaboration with Prof. Kris McNeill and his group at the University of Minnesota, Twin Cities; and supported by the Research Site for Educators in Chemistry program.

Dr. Trent Vorlicek, Dr. Bryce Hoppie and Dr. Dan Swart “Abnormal hydrogeochemistry within the Prairie du Chien confined bedrock aquifer, S.E. MN”

Dr. Daniel Swart presented the paper “The Midwest Consortium: A Model for Homeland Defense” to the Oxford Round Table on Criminal Law at Lincoln College, Oxford University, England on March 31-April 2006.

COMPUTER AND INFORMATION SCIENCE

Dr. Rebecca Bates, Assistant Professor, presented a workshop on Kinesthetic Learning Activities at the SIGCSE (Computer Science Education) Conference in Houston, TX, March 3, 2005. Her co-presenters were Steven Wolfman of the University of British Columbia and Andrew Begel of Microsoft Research.

ELECTRICAL AND COMPUTER ENGINEERING AND TECHNOLOGY

Dr. Gale Allen, Associate Professor, presented a paper at the ASEE Joint Conference for Illinois/Indiana and North Central, March 31-April 1, entitled, "Automated Data Acquisition and Wireless Additions for Student Sensor Labs" by Gale Allen, graduate students Srikanth Komati-Reddy / Praveen Uppalapati, and David Jones from Emerson Process Management.

During March, Dr. Bill Hudson, Professor, was selected to lead the Training for Electrical and Computer Engineering programs to be visited during the 2006-2007 academic year at the annual Electrical and Computer Engineering Department Heads meeting in Hawaii. Also during March he was asked to and did complete a pre-ABET review of an Electrical Engineering program in Texas.

INTERIOR DESIGN AND CONSTRUCTION MANAGEMENT

Construction Management Program, ABC Student CM Competition and Career Conference in Las Vegas, NV on March 15-18, 2006.

Nine students from MSU participated in this competition. Professor Farid J. Sabongi served as their coach and advisor before and during the competition. Participants were Jeremiah Westrum, the Vice President of the Construction Management Student Association; Matthew Dankers; Daniel Soost; David Freitag; Derek Price; Christiaan Durand; Elizabeth McKiernan; Eric Baarts; and Jared Mueller. Student teams from 23 universities competed to test their management knowledge, organizational skills, estimating ability and innovation. MSU students finished among the top nine teams. The competition was held in conjunction with the Associated Builders and Contractors Convention. The competition required student teams to develop a plan for a 40-bed, 42,000 square foot rehabilitation facility. Teams had to respond to changes in owner

requirements, prepare budgets for a complete cost estimate, prepare a construction schedule, and develop a site utilization plan and safety schedule.

Students had to demonstrate these competencies:

- Read and understand construction documents and contracts;
- Display an understanding of the construction process, including scheduling of labor and materials; marketing; cost estimating; and safety;
- Demonstrate an understanding of construction materials and their application;
- Provide a reasonable construction cost estimate;
- Identify potential safety hazards;
- Determine solutions for mitigation of personal injury and property damage;
- Work as a cohesive team
- Solve problems within a specified amount of time.

Students also participated in networking opportunities and educational seminars and they enjoyed the conference exhibits. Also at the conference Professor Farid J. Sabongi participated in the University Faculty Paper Presentations. The subject of his paper was "Design Build Project Delivery." Faculty from Brigham Young University and the Universities of Washington, Florida and Alabama also made presentations.

MATHEMATICS AND STATISTICS

Dr. Francis Hannick, Professor, will present a workshop on Hands-On Experience with Numerous Activities for the Elementary School Math Curriculum at the Annual Meeting of the National Council of Teachers of Mathematics in St. Louis on April 27.

MECHANICAL AND CIVIL ENGINEERING

Dr. Aaron Budge, Assistant Professor, was invited to present a paper at the University of Minnesota's 54th Annual Geotechnical Engineering Conference. The title of the paper was "Modeling Drainage Conditions During MSE Wall Construction." Dr. Budge also presented a paper entitled "Calibrating Vertical Deformations in a Finite Element Model of an MSE Wall" at the 2006 GeoCongress in Atlanta, sponsored by the Geo-Institute of the American Society of Civil Engineers.

PHYSICS AND ASTRONOMY

Dr. Russell Palma, Professor, will be presenting the 2006 Douglas Moore Research Lecture in Ostrander Auditorium at 7:00 pm on April 10. The title of his lecture is "NASA's Genesis and Stardust Missions: Exploring the Early Solar System". Admission is free and refreshments will be served afterward. Everyone is invited to attend. Dr. Palma will also present an invited Department of Physics and Astronomy colloquium at the University of Wisconsin-Eau Claire entitled "New Results from the Genesis and Stardust Missions", April 26, 2006.