

**COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY
FEBRUARY 2009**

GOOD NEWS

BIOLOGICAL SCIENCES

Decker NK, Abdelmoneim SS, Yaqoob U, Hendrickson H, Hormes J, **Bentley M**, Pitot, Urrutia R, Gores GJ, Shah VH. Nitric oxide regulates tumor cell cross-talk with stromal cells in the tumor microenvironment of the liver. *Am J Pathol* 173: 1002-1012 (2008).

CHEMISTRY AND GEOLOGY

Drs. Mary Hadley and Jeffrey Pribyl and Prof. Patricia Rambo presented "Another Tool in the Toolbox: Using Process Oriented Guided Inquiry Learning (POGIL) in the Classroom" at The Collaboration for the Advancement of College Teaching & Learning Professional Development Conference, Bloomington, MN, February 13, 2009.

Drs. Mary Hadley, Jeffrey Pribyl and Danae Quirk Dorr presented "Integration of POGIL to Enhance Student Learning Outcomes" at the Realizing Student Potential/ITeach Conference, Minneapolis Community and Technical College, Minneapolis, MN, February 28, 2009.

COMPUTER SCIENCE

The following students were selected to present at the National Convergence of Undergraduate Research in La Crosse, WI in April. Funding for student travel is provided by the MAX Scholarship. Title: Analysis of Pronunciation Variation and Linguistic Structure using Decision Trees Student Researcher: Tatyana Mamchuk; Research Advisor: Dr. Rebecca Bates. Title: Improved Storm Data Processing using Concurrent Computing Approaches Student Researcher: Shauna Smith (December '08 graduate) Research Advisors: Dr. Rebecca Bates and Dr. Deborah Nykanen.

Dr. Jie Wang, Assistant Professor, is a program committee member of the 4th International Conference on Hybrid Artificial Intelligence Systems (HAIS09), June 2009, Salamanca, Spain.

" White Matter Fiber Tract Segmentation Using Nonnegative Matrix Factorization", Xu Wei Liang, **Jie Wang** and Jun Zhang. Accepted by *the 3rd International Conference on Bioinformatics and Biomedical Engineering (iCBBE 2009)*, June 11-13, 2009 in Beijing, China.

Drs. Rebecca Bates, Marilyn Hart and Deborah Nykanen and student Tatyana Mamchuk presented a workshop called "Developing Interdisciplinary Peer Mentoring Groups: How Faculty and Students Benefit" at the Realizing Student Potential/ITeach Conference 2009 held in Minneapolis on February 27, 2009.

Computer Science hosted an open round test for the North American Computational Linguistics Olympiad on February 4, 2009. The Olympiad is a contest in which high-school students solve linguistic puzzles. In solving the problems, students learn about the diversity and consistency of language while exercising logic skills. The top 100 scorers from the nationwide first round are invited to the second round on March 11, 2009. At the MSU test site, two students, Andrew Peters of Rochester, MN and Nikole Castle of Falcon Heights, MN, will be participating in the second round test. The top 10 from the second round will be invited to represent the United States at the International Linguistics Olympiad held in Poland.

Rebecca Bates has been selected as a Fulbright scholar grantee to Brazil. She will spend the 2009/10 academic year on sabbatical working at the University of São Paulo. Her project is titled "Exploring Voices: Speech Recognition Applications and Narratives of Brazilian Women in Engineering & Computer Science".

ELECTRICAL AND COMPUTER ENGINEERING AND TECHNOLOGY

Q. Zhang, C. R. Menyuk, M. I. Hayee, C. Tavva, H.-W. Huang, R. Nair and M. Khaliq, "Computation Step-Size Study in Digital Post-Compensation of Fiber Optic Communication Systems", (note: Q. Zhang, C. Tavva, H.-W. Huang, R. Nair and M. Khaliq are with the Department of ECET at MSU)

Q. Zhang, M. I. Hayee, C. Ma, M. Howieson, A. Rahman, A. Miner, R. Kapadia, C. Tavva, R. Bajracharya, and H.-W. Huang, "On the Gaussian Approximation and Margin Measurements in Optical Amplifier Systems" (note Q. Zhang, A. Miner, R. Kapadia, C. Tavva, R. Bajracharya, and H.-W. Huang are with the Department of ECET at MSU, and M. Howieson and A. Rahman are with Thin Film Technologies)

The following proposed book chapter was accepted for *In-Tech Book* and is entitled "Optical Fiber: New Developments", ISBN 978-953-7619-X-X.

Qun Zhang and Chinna Tavva, "Split-Step Fourier Simulation Accuracy Control and Its Applications in Fiber Optic Communication Systems", (note Zhang and Tavva are with the Department of ECET at MSU)

After long delays in review, Dr. Qun Zhang, as the first author, has had two research papers accepted by the 43rd Conference on Information Science and Systems, which is a very reputable conference jointly sponsored by IEEE Information Theory Society and Johns Hopkins University. The papers will be on the IEEE Xplore database. The presentations will be in mid-March.

INFORMATION SYSTEMS AND TECHNOLOGY

Dr. Mahbubur R Syed, Professor, served as an Adjudicator of the Ph.D thesis entitled "Lossless Compression Using Cosets" submitted to Monash University, Australia.

Dr. Syed served as a reviewer for the 13th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2009) to be held jointly with the 15th International Conference on Information Systems Analysis and Synthesis (ISAS 2009) during July 10th - 13th, 2009 in Orlando, Florida, USA.

MATHEMATICS AND STATISTICS

The paper entitled "Symmetric Sign Patterns with Maximal Inertias" by I.-J. Kim and C. Waters has been accepted by the *Czechoslovak Mathematical Journal* for publication.

Dr. Jon Harper (with John Savage) presented "Using Computer Algebra Systems in a Developmental Algebra Course" at the 33rd Annual National Association for Developmental Education Conference, Greensboro NC.

Hongxia Yin, Yaping Wang and Liqun Qi: Shape-Preserving Interpolation and Smoothing for Options Market Implied Volatility, *Journal of Optimization Theory and Applications*, 2009.

Weibing Chen, **Hongxia Yin** and Yingjie Tian, Smoothing Newton Method for L1 Soft Margin Data Classification Problem, LNCS proceeding: ICCS2009: "Compute. Discover. Innovate." Baton Rouge, Louisiana, U.S.A., May 25-27, 2009.

MECHANICAL AND CIVIL ENGINEERING

Dr. Aaron Budge, Assistant Professor, served as the conference co-chair for the University of Minnesota's 57th Annual Geotechnical Engineering Conference held in Minneapolis on 27 February. Dr. Budge led one of the Case History sessions held at the conference, along with additional duties as a planning committee member. The conference was attended by approximately 200 geotechnical engineers from the Upper Midwest and Canada and is one of the most recognized geotechnical conferences in the region.