

School of Engineering

CHRISTIAN BROTHERS UNIVERSITY

News - December 2002

PACKAGING ENGINEERING PHASE II GRANT

Thanks to the Medtronic Foundation for giving a \$10,000 grant to the School of Engineering in support of the implementation the Phase II of the Packaging Engineering Education Program at CBU. It will be used to expand and to promote the program during the period of June 1, 2003, to May 31, 2005. In spring 2001, the Foundation gave \$1,000 to support the Phase I project. It was used to purchase textbooks for the first course in packaging. Thanks to **Ms. Lisa Bell** (IA), **Dr. Asit Ray** (ChE), **Mr. Yongquan Zhou** (FedEx), and **Dr. Siripong Malasri** (Dean) for putting together the proposal to the Foundation.

The Packaging Engineering Program has grown from an elective course in Spring 2001 to a four-course certificate program in Fall 2002. Over \$200,000 worth of packaging lab equipment will be acquired later in 2005 from the recent \$3M grant from the Assisi Foundation of Memphis.



Dr. Siripong Malasri (left) and Dr. Asit Ray (middle) received the Medtronic grant from Ms. Robin Turner (right)

For more information about the Packaging Engineering Program at CBU, please check the program website at <http://www.cbu.edu/engineering/packaging.html> or contact **Dr. Asit Ray**, Packaging Program Coordinator, at array@cbu.edu or (901) 321-3418.

CLASS COMPETITIONS

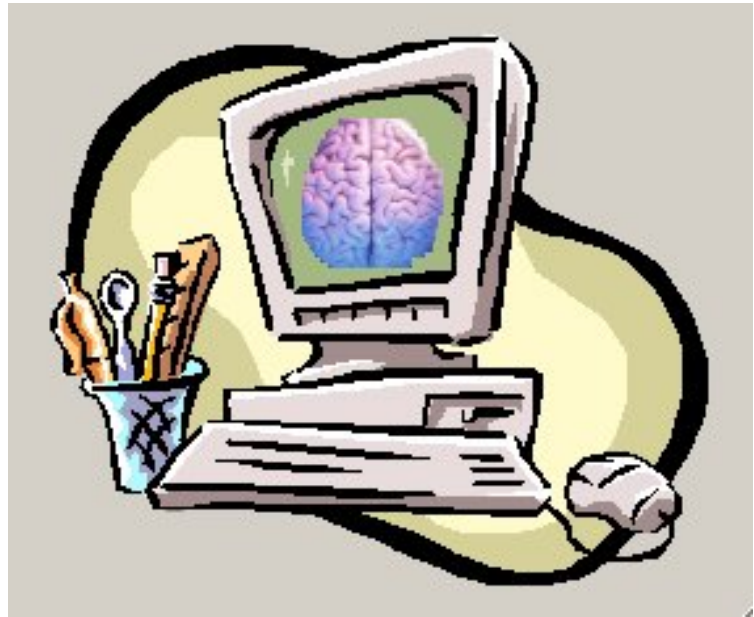
There are many competitions in various engineering courses. In this issue, we would like to congratulate the following winners of such competitions this fall:

- **Mike Gustafson, Joseph Blalock, and Garrett House** were winners of the Battleship Game Development in *ECE 112 Computer in Engineering Problem Solving*. The class was asked to use Java programming language to write the player's response in the game of battleship. The program had to generate coordinates to fire upon the opponent using a search pattern that may be random or follow a defined series, to receive coordinates when fired upon by the opponent and subsequently report "hit" or "miss" and report if the ship is sunk. If a ship is located, the coordinates fired would follow a



different search pattern which would focus on sinking the ship in the fewest moves. Extra points were awarded if the students posted his/her Java Applet on the CBU web server. For more information, please check the course web site at: <http://www.cbu.edu/~jmcgrory/ECE112.html>. The site contains links to the work of these three students and others in the class. Ms. Joan McGrory was the instructor of the course. She can be reached at jmcgrory@cbu.edu.

- Students in *ECE 457 Connectionist Artificial Intelligence* were asked to develop a real-world application using artificial neural network technology. They, in a group of three students, selected a problem, collected historical data, modeled a network, and trained/validated the network. Then each student wrote his/her own graphical user interface (GUI). Each turned in a stand-alone application file (EXE) with a User's Manual file. All programs were posted on WebCT. The class then voted for the top three winners. The winners were:
 - 1st Place: **William Smith** on the project entitled "Will Miami Win Another National Championship?" He can be reached at wsmith@cbu.edu.
 - 2nd Place: **Jeremey Nunnally** on the project entitled "Interview Assessment Utility." He can be reached at jnunnall@cbu.edu.
 - 3rd Place: There were two winners, **Phillip Tran** and **Matt Osborne** for their projects entitled "The Psychic Guy" and "Will the University of Miami (FL) Win the National Championship in College Football?" respectively. They can be reached at ptran@cbu.edu and mosborne@cbu.edu.



For more information about the applications, please contact the students directly. **Dr. Siripong Malasri** was the instructor of the course.

**LADY BUCS NAMED
THE 2002 NCAA
DIVISION II
WOMEN'S SOCCER
CHAMPION**

It motivated them every waking moment for the past year. Coming so close, but not yet achieving the ultimate goal. The Christian Brothers University Women's Soccer team need wait no more. On Sunday, December 8th, at the NCAA Division II Women's Soccer Championships, the Lady Buccaneers brought home the Gold to Memphis, TN, with a 2-1 win over the University of Nebraska-Omaha.

Anna Rask and **Sofia Rask**, the twin sisters from Sweden and ME majors, are members of the team. They must have used the engineering knowledge they learned from classes, such as Dynamics. Congratulations!

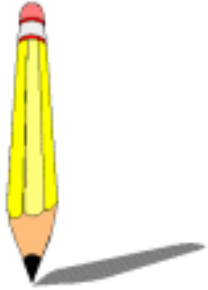


Sofia Rask (left) & Anna Rask (right)

2002 FACULTY PUBLICATIONS

Below is a list of the 2002 engineering faculty publications:

- **B. B. Beard**, "Scaling Violations in the Antiferromagnetic Heisenberg Model," *Nuclear Physics*, Elsevier, Vol. 106, pp. 896-898, 2002.
- Shane De Lima, Tom Mascari, Jr., and **John Ventura**, "Adapting Self Diagnostic Technology for a High Lumen Fluorescent Emergency Ballast," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **R. L. Drake**, **M. A. Driver**, and **E. B. Welch**, "A Low-cost, Interdisciplinary, Engineering Instrumentation Laboratory Course," *Proceedings of the 2002 American Society for Engineering Education Annual Conference & Exposition*, 2002.
- **R. Drake**, A. Howard, and **J. Ventura**, "Some Implementation Results and System Effects of Power Electronic Speed Control of Three-Phase AC Motors in Closed-Loop Operation," *Proceedings of the Thirty-Fourth Southeastern Symposium on System Theory*, Huntsville, AL, March 18-19, 2002.
- Juanita Ford, **L. Yu Lin**, and Roger Smith, "Simulation of St. John - New Madrid Flood Control Using HEC-RAS Model," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)
- Shalini Gupta, Monte DePouw, and **John Ventura**, "Database Design for Electrical Panels," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Carl Hardeman**, "The File/Database Course in the Masters of Engineering Management Program at Christian Brothers University," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Neal Jackson**, "On-going Assessment in the Classroom," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)
- **Neal Jackson** and Carl Williams, "Project Scheduling and Risk," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)
- Brian King and **Siripong Malasri**, "An Intelligent Plural Auto Recognition Search Engine," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Howard Lawrence**, "The Use of Modern Capital Budgeting Techniques," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **P. Limper**, "Process and (Virtual) Reality: Thoughts on Technology and Value," *Process Studies*, Vol. 31, No. 1, pp. 130-145, 2002.
- **L. Yu Lin** and T. C. Ho, "Control of Heavy Metals," *Air and Noise Pollution Control*, Vol. 1, Handbook of Environmental Engineering Series, The Humana Press, 2002.
- **L. Yu Lin** and Jy-Gau Sah, "Nitrogen Removal in Leachate Using Carrousel Activated Sludge Treatment Process," *Journal of Environmental Science and Health*, Vol. A37, No. 9, pp. 1607-1620, 2002.
- Kriangsiri Malasri and **Siripong Malasri**, "Java Applets for Teaching Neural Networks," *Computers in Education Journal*, ASEE, Vol. XII, No. 1, pp. 58-65, January - March 2002.
- Kriangsiri Malasri and **Siripong Malasri**, "Backpropagation Networks for Time Series Forecasting: Case Studies in Data Modeling," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Siripong Malasri**, **Neal Jackson**, and Neil Masner, "Innovation/Idea Center: A Model for Economic Development," *Proceedings of the MAESC 2002 Conference*, May 2002.
- Barbara Meyer and **Neal Jackson**, "Certification for Engineering Managers," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)
- **Margaret Miller**, "Collaborative Analysis in Problem Solving," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)
- **Ali Pourhashemi** and Ramesh Chawla, "Thermal Studies of the Dry and





Wet Inert Porous Media," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)

- **Judy Ramage**, "The Use of Differential Costing in a Master of Engineering Management Program," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Asit Ray**, "Effect of Annealing Time on the Crystalline Properties and Oxidative Stability of Radiation-induced Crosslinked Ultra-High-Molecular-Weight Polyethylene," *Program & Abstracts, the 5th Tennessee Conference on Biomedical Engineering and the 3rd Western Region Conference of the Tennessee Biotechnology Association*, April 4-6, 2002, p. 14. (Abstract)
- **Asit Ray** and **Y. Zhou**, "Teaching Packaging at Christian Brothers University," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **Yeu-Sheng Paul Shiue** and Geoffrey Beech, "Comparative Study of Two Kinematics and Dynamics Analysis Tools for Multi-Body Systems," *Proceedings of the Huntsville Simulation Conference - HSC 2002*, Huntsville, AL, October 9-10, 2002.
- **Fred Terry**, et. al., "GE is the BASE: The GER Committee," *Excellence in Teaching 2002*, Christian Brothers University, August 2002. (Abstract)
- **Fred Terry**, **Peter Limper**, and **Siripong Malasri**, "Preliminary Survey of Teaching Engineering Ethics," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **John Ventura**, "Accreditation Criteria for Online Educational Programs," *Proceedings of the MAESC 2002 Conference*, May 2002.
- **John Ventura**, "Accreditation Criteria – Implementing EC-2000 Criteria," *Excellence in Teaching 2002*, Christian Brothers University, August 2002. (Abstract)
- **Yongquan Zhou**, "An Overview of the Measurement and Analysis of the Shock and Vibration in the Distribution Environment," *Proceedings of the MAESC 2002 Conference*, May 2002. (Abstract)