

Christian Brothers University

SCHOOL OF ENGINEERING



Chemical



Civil



Electrical



Mechanical



Graduate Engineering

Engineering Newsletters

June - September 2004

INDICATORS OF EXCELLENCE

The chemical, civil, electrical, and mechanical engineering degree programs at CBU are re-accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (111 Market Place, Suite 1050, Baltimore, MD 21202-4012). The visiting team was on campus in September 2003. Congratulations to the engineering faculty/staff for their excellent work during the re-accreditation process! Also thanks to so many people, including other CBU faculty/staff/administration, students, alumni, advisory board members, and friends who contributed to the process.



The Princeton Review has named CBU as one of the top 100 schools in the Southeast in its featured publication "Best Colleges: Region by Region." Check it out at: <http://www.princetonreview.com/college/research/regional/>.



CBU is also once again listed in U.S. News and World Report's "America's Best Colleges" (2005 edition) as one of the top 40 Southern Universities Granting Master's Degrees. Check it out at: www.usnews.com.

ACTIVITIES FOR HIGH SCHOOL STUDENTS

In June 2004, the School of Engineering hosted two summer programs for high school students. Ten students from Bartlett, Briarcrest Christian, Craigmont, Ridgeway, St. Benedict at Auburndale, and White Station high schools attended a two-week (June 7-18) **Civil Engineering Summer Program for Female High School Students** funded by the American Society of Civil Engineers (ASCE). The other twenty-one students from Bartlett, Briarcrest Christian, Central, Christian Brothers, Cordova, East, Evangelical Christian, Houston, Kirby, Memphis Catholic, Midway, Memphis Harding Academy, Olive Branch, Snowden, Southern Baptist Educational Center, St. Benedict at Auburndale, and Westminster Academy high schools attended a one-week (June 14-18) **Packaging Engineering Summer Program for High School Students** funded by the International Paper Foundation.



A Field Trip for Civil Engineering Summer Program

Exploring Engineering and Science @ CBU was held on September 24th. There were about 30 people visiting our engineering open house in the new lab facility, Saint Benilde Hall. Albert Crews III (ECE'93), Larkin Gieringer (CE'99), Dr. Ali Pourhashemi (ChE) and Dr. Joe Londino (ME) served on the Alumni/Faculty Panel.

A new **Engineering Speakers for High School Classes** is now in place for this academic year. Our engineering professors are available to talk to area high schools on various topics, including Environmental and Pollution Control; Site Remediation; Will My Town be Flooded?; How is Gasoline Made?; Stoichiometry Calculations for Chemical Plants; From Yarn to Electrons: A Short History of Computers; Manufacturing Engineering; Packaging: More Than Meets the Eye; Artificial Neural Networks: Computer Programs That Mimic the Human Brain; Keeping Secrets Secret: An Introduction to Cryptography. A program brochure can be downloaded at: <http://www.cbu.edu/engineering/HSSpeakers.pdf>.

2004 LASALLIAN ENGINEERING SUMMIT

Do you know that there are over twenty Lasallian engineering programs worldwide? Do you know that there are only two Lasallian engineering programs in the U.S. at Manhattan College and Christian Brothers University?

The School of Engineering at CBU hosted the first Lasallian Engineering Summit on July 16-20, 2004. The objective of the summit was to explore and develop joint educational programs/projects involving possible faculty/student exchanges and on-line program/courses. There were a total of 26 participants from Christian Brothers University (USA), De LaSalle University Dasmaringas (Philippines), La Salle Barcelona (Spain), Manhattan College (USA), Universidad De La Salle (Colombia), Universidad La Salle Ciudad de Mexico (Mexico), Universidad La Salle Cuernavaca (Mexico), and Universidad La Salle of Pachuca (Mexico). The group came up with seven joint projects toward a common goal of excellence in engineering education.

The next summit, hosted by Universidad La Salle Ciudad de Mexico (Mexico), has been scheduled for May 27-30, 2005, in Cuernavaca, Mexico.

More information, please check the Lasallian Engineering Global Network web site at: <http://www.cbu.edu/engineering/legn/>.



MAESC 2005 CONFERENCE

Mark Your Calendar! The MAESC 2005 has been scheduled for Wednesday, May 11, 2005. This will be the 7th annual conference. The theme is "Engineering Management: Leadership in Engineering Practice & Education." **Dr. Neal Jackson**, Director of Engineering Management Graduate Program is the Conference Chair. **Dr. Joe Londino** (ME) is Technical Program Chair.

As of September 27, Buckeye Technologies, Inc., and Memphis BioWorks Development Council have signed on as a corporate sponsor and the following non-profit organizations have joined a list of the conference co-sponsors:

- American Institute of Chemical Engineers, Mid-South Section
- American Society of Heating, Refrigerating and Air-Conditioning Engineers, Memphis Chapter
- American Society of Mechanical Engineers, Memphis/Mid-South

Section

- De La Salle University Dasmarias (Philippines), College of Engineering and Technology
- Engineers' Club of Memphis
- Greater Memphis Association for Quality
- National Engineering Management Honor Society, Alpha Delta Chapter
- Memphis Joint Engineers Council
- Society of American Military Engineers, Memphis Post
- Southwest Tennessee Community College
- Union University, Department of Engineering
- University of Mississippi, School of Engineering
- University of Wisconsin (Madison), Materials Research Science and Engineering Center
- US Army Corps of Engineers, Memphis District

For more information about being a co-sponsor or a corporate sponsor, please contact Dr. Siripong Malasri at (901) 321-3419 or pong@cbu.edu.

MAESC

Memphis Area Engineering and Sciences Conference



www.cbu.edu/engineering/maesc

STUDENT NEWS

Ben Reves (ChE) has been selected as a recipient of one of the \$1,000 AIChE Donald F. and Mildred Topp Othmer National Scholarship Awards for the 2004-2005 academic year. This award reflects his excellent academic record, his enthusiastic involvement in AIChE activities, and his thoughtful chemical engineering career plans. His achievement will be recognized at the 2004 Annual Student Conference in Austin, TX, in November. Wow!

Congratulations to **Jeff Higgins, Nick Marasa, Andrew Warren, and Wes Templeton** for placing Third in the Hollywood Squares Competition at the ASCE Tennessee Section Meeting in Smyrna, Tennessee, on September 24th. The team received a trophy and a check for \$300. Students from University of Tennessee (Knoxville), University of Tennessee (Chattanooga), University of Tennessee (Martin), Tennessee Tech University, University of Memphis, Vanderbilt University, Tennessee State University, and CBU competed in the event. **Mr. Gene McGinnis** (CEE Chair and ASCE Student Faculty Advisor) accompanied the students to the meeting.



Jeff Higgins (2nd from Left), **Nick Marasa** (3rd from Left), **Andrew Warren** (4th from Left), and **Wes Templeton** (5th from Left)

Joel Johnson, P.E., (MEM) has been named president and principal of Burr & Cole, a consulting engineering firm in Memphis, TN, effective October 1st. Joel has been with the firm for more than 15 years and has provided planning, design, and management services on a range of Burr & Cole projects.

ALUMNI NEWS **Julie (Brewer) Schmidt** (CE'99) passed the PE exam in Missouri recently. She is now working for Hutson Surveying in Bunker Hill, Illinois, near St. Louis, Missouri. She is responsible for engineering work that is associated with surveying work, including the design of subdivisions, drainage systems, and roadways. She is in the process of filing for an Illinois license.

Jonathan Pennington (CE'99) also passed the PE exam recently. He works in the Civil Design Branch of the U.S. Army Corps of Engineers (Memphis District). His office designs a wide range of projects with an emphasis on flood control and river maintenance. He has been responsible for plans and specifications for channel enlargements, grade control structures, seepage relief wells on levees, etc. He said in an email after passing his PE exam, "... you (CEE faculty) deserve much of the credit for me passing. Thank you very much."

Frank Herron (EE'73) retired in October 2003 after 30 years with IBM. He now owns and manages his personal computer company serving homes and small businesses. He said, "I love the new freedom it has brought with it. I could not have done it without my CBU education and my years of Catholic education before that. All those Brothers!"



Congratulations to **Bobby Fisher** (CE'70 - Left in the picture) and **Jeff Arnold** (CE'78 - Right in the picture) for moving their firm to a new building recently. The new elegant and spacious building, owned by Fisher & Arnold, Inc., is located at 9180 Crestwyn Hills Dr., Memphis, TN 38125. F&A was founded in 1985 by Bobby Fisher and Jeff Arnold. It began by offering primarily civil engineering services to surrounding municipalities and real estate developers. It

has grown to be a leading multi-disciplined design firm serving clients throughout the United States and abroad. F&A offers services in various areas including Architecture, Surveying, Landscape Architecture, Civil Engineering, Electrical Engineering, Sanitary Engineering, Natural Gas Engineering, Transportation Engineering, Environmental Services, Land Planning & Development, Geographic Information Systems, and Interior Design. Currently, the firm has offices in Memphis (TN), Nashville (TN), and Meridian (MS).

Zac Scott (ChE'01) and Calvin Burnett of the VRC Company spoke to the CHE 437 class on the topic "Real World Process Control Equipment" on Wednesday, Sept. 22. Many thanks!

Niki Quarmyne (ECE'03) is a Product Development Engineer with Cummins, Inc., in Columbus, IN. She works with the Current Product Electronics Team, supporting electronic control modules on midrange diesel and natural gas engines. Her work deals with design modifications for new technology and revisions due to component obsolescence issues as well as analysis of failed electronic control modules reported by customers. Niki said in an email to ECE faculty recently, *"Thanks for all the different skills you taught us. I actually use most of the knowledge from my classes, especially Electronics and Circuits, on a very regular basis."*

Bernard Zawada, P.E., (MEM'03) has been named secretary-treasurer and principal of Burr & Cole consulting engineering firm in Memphis, TN, effectively on October 1st. He has been with the firm for more than 15 years and has provided planning, design, and management services on a range of Burr & Cole projects. He said recently in a company's press release, *"Burr & Cole has a reputation for successfully solving difficult design assignments, and that tradition and reputation will continue. The training that I received at CBU helps me on a daily basis, and is especially important as I become even more involved in the firm's management."*

Lisa Lavie (ECE'03) published an article entitled "Electrical Safety for an Offshore Power System" in the August/September 2004 issue of *IEEE*

Potentials. Lisa is currently working as an intern in the Energy Management System (EMS) Department of the American Transmission Company (ATC) in Wisconsin. She is also working toward her MBA degree in Operations Management at the University of Illinois at Urbana-Champaign.

Congratulations to **Ulysses Polk** (MEM'02) and his family for having a little baby girl, Destiny DeAunna Polk, on August 11, 2004, at 6:04 p.m. She weighed 6 lb. 11 oz. She was 19 inches long at birth.

Jackie Dean Mitchell (EE'84) and husband Jeff Mitchell, big brother Dean and big sisters Katie and Elizabeth announce the April 6, 2004 birth of Lilly Grace. Congratulations! The Mitchells moved to Austin, Texas in July.

FACULTY/ STAFF NEWS

Bob Moats joined CBU Engineering as Mechanical Technician on June 1st. Bob has been with CBU Maintenance Department since 1986. Before joining CBU, he worked for the Catholic Diocese of Memphis, Henson Rental Properties, Wayne Craig Construction, and Buckeye Construction. He served the United State Army from 1973 to 1975. His office is right next to the lobby of Saint Benilde Hall. Welcome to the School of Engineering, Bob!

Congratulations to **Dr. Mike Santi**(ME) for receiving the Group Achievement Award from NASA last spring for his exceptional contributions in providing insight and design support for the Engine Control and Health Management System for the RS-84 engine.

Also congratulations to **Dr. Paul Shiue** (ME) for receiving Best Poster Award for his poster paper entitled "Knowledge Bowl for Manufacturing Processes." The award was given by the Mechanical Engineering Division at the 2004 ASEE Annual Conference.

Dr. Siripong Malasri (Dean) was named the 2004 Outstanding Engineer of the Year by the Tennessee Society of Professional Engineers at its annual meeting in Franklin, TN, in July.



Dr. Siripong Malasri (right) received the Outstanding Engineering of the Year award from TSPE president, Sandra Knight

Dr. Siripong Malasri (Dean), Dr. Asit Ray (ChE), and Mr. Yongquan Zhou (Packaging Adjunct & FedEx Packaging Engineer), together with Mr. Larry Rutledge (FedEx Packaging Manager), gave a talk on packaging engineering at the September Meeting of the Society of American Military Engineers (Memphis Post).

John Ventura (ECE) presented a paper entitled "Animated Agents: Motivational Consequences and Connotations" at the Society for Applied Learning Technology (SALT) Conference in Arlington, VA, on August 18-20, 2004.

Several of our engineering faculty members were involved with the following papers, which were presented at the recent MAESC 2004 Conference:

- **Favian deLima, Brandon Cartwright, and John Ventura (ECE), "Portable Restroom Lighting Using LEDs."**
- **Eugene Fayne, Leonard Mills, Patrick Ireland, Joan McGrory (ECE), and John Ventura (ECE), "LabVIEW: Instrumentation Lab and Industry."**
- **Christopher Foster and Asit K. Ray (ChE), "LED Kayak Paddle."**
- **Ian Gilmore and Joseph Londino (ME), "Using Artificial Neural Networks to Predict Grinds for the Small Block Chevrolet Camshaft in Aftermarket Applications."**
- **Neal Jackson (MEM), "Certification Process for the Master of Engineering Management Program at Christian Brothers University."**
- **Neal Jackson (MEM), "Engineering Management Honor Society at Christian Brothers University."**
- **Neal Jackson (MEM) and L. Yu Lin (CEE), "Knowledge Sharing Networks and Communities of Practice."**

- **Peter Limper** (MEM) and **Max Maloney**, "Ethical Considerations Relating to Intellectual Property Protection."
- **K. Madhavan** (CEE), "Integrating Failure Case Studies in an Undergraduate Civil Engineering Program."
- **K. Madhavan** (CEE) and **S. Malasri** (Dean), "Registration of Engineering Faculty - Preliminary Survey Results."
- **Siripong Malasri** (Dean), "Hands-on Engineering Education."
- **S. Malasri**(Dean), **R. Price** (ChE), **P. Shiue** (ME), **A. Ray** (ChE), **G. McGinnis** (CEE), **A. Pourhashemi** (ChE), **K. Madhavan** (CEE), **J. Londino** (ME), and **J. Ventura** (ECE), "CBU Engineering Lab Facility."
- **John McQuary**, **L. Yu Lin** (CEE), and **Tracy James**, "Communities of Practice."
- **Gieselle Mendonca**, **Monroe Sparks**, and **John Ventura** (ECE), "Design and Implementation of a Conveyor Control System."
- **Ali Pourhashemi** (ChE) and **Randel Price** (ChE), "Challenges in Transforming ChE Labs."
- **Judy Ramage** (MEM) and **Howard Lawrence** (MEM), "Sarbanes Oxley: Legislating Good Behavior."
- **Asit Ray** (ChE) and **Siripong Malasri** (Dean), "Teaching Packaging Engineering at Christian Brothers University."
- **Khyati Shastri**, **Joe Treska**, and **John Ventura** (ECE), "Automation of a Packaging Line."
- **Paul Shiue** (ME), "Put Your Imagination into Reality: Design Through Manufacturing and Product Realization."
- **Fred Terry** (ECE), "Engineering Problem Solving in a Moral and Ethical Context."