



ISSUES

CONCRETE

CHAIRMAN'S CORNER

by Marty Lipinski, Chair

In our mission statement we identify three areas in which we are pursuing excellence -TEACHING, RESEARCH, and SERVICE. The Department of Civil Engineering and its students and faculty contributions in the area of service are outstanding and I would like to take this opportunity to highlight some of them, in particular two exceptional outreach activities.

Service encompasses a wide range of activities, both internal and external to the university. Inside the university, Civil Engineering faculty are key members of committees that recommend improvements to campus buildings and grounds, guide the athletic program, pur-

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CE Advisory Committee Members from l to r : Tweed Bryant, Bob Bailey, Tom Fox, Don Taddia, Charlie White

ADVISORY COMMITTEE MEETS

During the past year, the Department of Civil Engineering Advisory Committee was reestablished to create a bridge to the environment external to the university. The concept of a departmental advisory committee was originally advanced by Dr. John Smith while he was serving as department chair. The committee was activated by then chair Dr. Otto Helweg in 1989. This committee was instrumental in developing the college's cooperative education program.

The mission of the advisory committee is to provide advice and support the Department of Civil Engineering and its educational, research, and community outreach programs. Members of the committee, selected from government, industry, and the private consulting sectors are:

- Robert Bailey, The Pickering Firm
- Charles Bryant, Deleuw Cather, & Company
- Donald Dunn, U.S. Army Corps of Engineers
- Ted Fox, Shelby County Division of Public Works
- Michael L. Kernell, Tennessee House of Representatives
- Donald Taddia, Federal Express
- Charles White, White Contracting, Inc



Dr. Lipinski presents a plaque to Mr. Coltart on behalf of the Civil Engineering Department

Technician Retires

Mr. John Coltart, Mechanical Technician, retired this past summer after over twenty years of service to the Herff College of Engineering. Mr. Coltart's skill as a machinist and a problem solver was known throughout the campus. Faculty from other colleges also came to him when they needed help designing and building that very special piece of apparatus for research. He was a special friend to the Department of Civil Engineering, helping numerous professors and graduate students with their work. He was presented a plaque which read, "You are a true master craftsman and a friend of the department who taught us the value of quality workmanship and demonstrated patience and understanding as a member of our team. You kept our laboratories running and your skills helped build our research program".

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PROFESSIONAL DEVELOPMENT PROGRAMS

The Department of Civil Engineering is embarking on a partnership with the West Tennessee Branch, ASCE, to provide professional development programs to engineers in the tri-state region.

The first program will be held on October 6 & 7, 1997. The initial two-day workshop will be on the subject of Pavement Design. Instructors will be Dr. Roger Meier, U of M faculty member, and Harry Pratt, Allen and Hoshall Company.

According to Leon Davenport (BSCE 1993), ASCE Branch President, these programs will provide local engineers with opportunities to hone their skills and earn professional development credits needed to maintain professional registration in Tennessee.

Future planned workshops include one devoted to environmental engineering topics led by Dr. Larry Moore in January, 1998, and Earthquake Engineering Design led by Dr. Shahram Pezeshk in March, 1998.

GROUNDWATER INSTITUTE NEWS

The University of Memphis' Ground Water Institute has been honored by the Tennessee Department of Environment and Conservation with its Higher Education Environmental Stewardship Award.

The institute was one of several organizations, businesses and schools recognized as winners of the department's Environment and Conservation Stewardship awards. Dr. John Smith, Professor of Civil Engineering and the Institute's Director, accepted the honor during a luncheon at the Summit Club in Memphis.

The institute was recognized for its promotion of environmental stewardship during 1996.

Joining the U of M in the project were the Memphis Light, Gas and Water Division; the cities of Germantown, Millington and Collierville; Coors Brewing Co.; and DuPont Chemical Co.

The Ground Water Institute was organized in 1992 to conduct research leading to improved management of the region's ground water supply.

High Strength Concrete Team Takes 1st Place at ASCE Regional Conference

This past spring the ASCE student chapter traveled to Florida for the Southeast Regional Conference. The University of Memphis Student Chapter competed against over twenty universities in a variety of events ranging from concrete canoe construction, balsa wood bridge building, surveying, and other civil engineering related contests. The group finished very well, placing in the top ten ahead of schools such as Alabama and Georgia Tech.

A first place trophy was captured by the team competing in the Concrete Strength Competition. Their concrete cylinders won with an ultimate high strength of **27,000** psi. The High Strength Concrete team consisted of Bennie Benson, Michael Winkler, Bobby Smith, Julie Etherton, Clay Culwell, and Jonathan Honeycutt. All of these members played key roles in the development of the winning concrete. Work on the mix proportions and the mixing, curing and breaking procedures began last September and continued until a week before the conference in March, when the winning cylinders were cast. Thanks to their extensive research and development, the team was able to consistently produce 26,000 to 28,000 psi concrete.

Members of the group learned a great deal about High Strength Concrete as well as working together as a winning team. ASCE members owe tremendous thanks to the many people and companies who graciously donated materials, equipment, knowledge, and time that was desperately needed to develop the winning mix. Special thanks are due Dr. Meier, the team's advisor, Billy Neely, Steve Kenley, and Greg Bowman.



Michael Winkler mixes a fresh batch of bread to eat while working on the concrete cylinders.



Six meetings were held during the 1996 -1997 academic year.

The new officers elected in the spring are:

President	Bobby Brock
Vice-President:	Carter Bagley
Secretary:	Bennie Benson
Treasurer:	Bobby Smith

The group took two field trips, the first to the Memphis International Airport, and the second to the Memphis Area Transit Authority. Three speakers were welcomed by the ITE Student Chapter during the Fall semester. Alan Gray, Rideshare Director from the Memphis-Shelby County Office of Planning and Development. Mr. Gray gave a presentation on Public Transportation & Transportation Management Considerations." The second speaker was Mr. Richard Brown of IFC Kaiser International. Mr. Brown is a principal planner for the firm which is preparing the Memphis Long Range Transit Plan. He discussed the Light Rail Plan for the region. The third speaker was Dr. Tom Fox, Director of Planning and Capital Projects for the Memphis Area Transit Authority. Dr. Fox gave a presentation on current projects including the downtown trolley loop extension, Central Station renovation, construction of the north transfer station.

A calendar of activities for the 1997-98 academic year is now being organized. Tentatively, plans include monthly meetings with practicing transportation professionals as speakers, field trips, and social events. The group is looking forward to assisting with the Southern District ITE Meeting to be held in Memphis in April.



Dr. Fry Receives University Teaching Award

Dr. Tom Fry was one of four professors receiving University Distinguished Teaching Awards at the Spring, 1997 Faculty Convocation. This is the university's highest recognition for outstanding teaching. He was chosen from more than 250 professors and instructors nominated by students, alumni, and faculty colleagues. Dr. Fry is the first Civil Engineering professor to receive this university-wide honor. He is a multi-year recipient of the Faculty of the Year Award given by Civil Engineering students in recognition for his outstanding teaching. Semester after semester, students praise Dr. Fry and his geotechnical courses. They cite his well organized lectures and his ability to bring his practical experiences into the classroom. When given the award, Dr. Fry said, "I'm also very appreciative - because of the efforts of others - especially the students who have been so responsive".

FACULTY NOTES

Dr. Jerry Anderson - Dr. Anderson has been appointed by Shelby County Mayor Jim Rout to serve on the Memphis Metro committee. He is continuing his research with the Memphis District, U.S. Army Corps of Engineers through the Ground Water Institute. He is currently auditing and providing information to the Tennessee Wildlife Resources Agency (TWRA) and assisting with GIS support for the West Tennessee Tributaries Project (WTTP).

Dr. Charles Camp - Dr. Camp was selected as the *Faculty Member of the Year* by the ASCE Student Chapter. The award was given at the spring banquet honoring graduating seniors. Dr. Camp was cited for his commitment and outstanding work with the lower division introductory course sequence.

Dr. Martin Lipinski - Dr. Lipinski was a participant in an interna-

tional technology scanning tour of Australia and New Zealand sponsored by the Federal Highway Administration. Dr. Lipinski was selected along with eight other highway safety engineers and professionals to study the application of Roadway Safety Audit procedures. While "down under," the team visited Melbourne, Canberra, and Sydney in Australia and Wellington in New Zealand, meeting with local, state, and federal transportation officials and touring sites where safety audits were conducted.

Dr. Roger Meier - Dr. Meier attended the 2-week NCAT Professor Training Course in Asphalt Technology at Auburn University and a 1-week NSF Undergraduate Faculty Enhancement workshop on "Development of Electronic Courseware for Enhanced Learning in an Integrated Classroom/Laboratory Environment" at Bucknell University.

Dr. William Segui - Dr. Segui will be participating in the American Institute of Steel Construction lecture series this fall. The program, "Designing Steel for Serviceability," will be held in Memphis on Dec. 2, and in Nashville on December 4. He will be giving the lectures on the topic of Roof Ponding.

Dr. Eugene Wheeler - Dr. Wheeler has had a paper, "Spectrum Loading and Crack Growth," originally published in 1972, republished in a volume titled, "Foundations of Linear Elastic Fracture Mechanics." The paper, which presented the first successful method of calculating the growth of cracks in metal under a series of variable amplitude loads, is one in this collection of papers jointly published by the Society of Experimental Mechanics and the International Society for Optical Engineering.

Scholarship Recipients

The department scholarship program has continued to grow thanks to the help and support of organizations and individuals. Last year one new scholarship, the Farley Memorial Scholarship, was added. This scholarship was made possible through the generous gift of Mr. and Mrs. H. J. Farley in honor of their son Donald. Don was a senior in the program and was killed in a tragic automobile accident in 1993.

For the first time last year a University of Memphis student was eligible for the regional scholarship program offered by the Kentucky-Tennessee Water and Environmental Control Federation. Justin Walpole was selected to receive this \$500 scholarship.

Another first was achieved by Carter Bagley who received the Tennessee Section Institute of Transportation Engineers \$500 scholarship for 1997-98. He is the first University of Memphis student to be given an ITE scholarship in competition with students from The University of Tennessee, Knoxville and Vanderbilt University.

The success of our students in competing for regional and national awards is an indication of the growing stature of the program. The following is a listing of all departmental and professional scholarship recipients:

1996-97 Academic Year	1997-98 Academic Year
Pickering Scott Fletcher	Pickering Dreama Fox
Associated General Contractors Shawn Billings Elizabeth Bowman Dreama Fox Sarah Fred Irick Matt Lowe	Associated General Contractors Loree Baldi David Burns Karen Higgins Lorie Tudor
Joe Rutherford Memorial Stephanie Blackburn Eddie O'Neill	Joe Rutherford Memorial Sarah Fred Irick Bobby L. Smith
Tennessee Road Builders Roy Andrews Bennie Benson Donny Davidson Doug Duke	Tennessee Road Builders Carter Bagley Bennie Benson Donny Davidson Matt Lowe Victor Weddle
Maxwell F. McDade, Sr. Jamie Evans Don Fletcher	Maxwell F. McDade, Sr. Michael F. Winkler
Don G. Farley Memorial Endowment Amanda Stewart	Don G. Farley Memorial Endowment Scott Nelson
KY/TN Environment Association Justin Walpole	Tennessee Section, Institute of Transportation Engineers Carter Bagley

Alumni Notes

Your classmates, friends and former teachers would like to hear what's going on in your life - your accomplishments, and both personal and professional growth, i.e., promotions, awards, job changes. You can return the form included at the end of the newsletter or send us an e-mail at MLIPINSK@CC.MEMPHIS.EDU. Don't forget to check out our website at <http://www.ce.memphis.edu>. An alumni information form is available on the webpage.



C. Randolph Krosp (BSCE 1979) is the Gulf Coast Area Maintenance Manager for Air Products and Chemicals. He oversees the maintenance of \$200 million of cryogenic equipment.

James Thomas (BSCE 1986) serves as Flight Commander at the Joint Aviation Electronic Warfare School at NTTC Pensacola. He instructs all aspects of electronic combat to DOD aviators.

Jamie Evans (BSCE 1996) married Stephanie Eiland on May 24, 1997. He is currently working on a MSCE degree at The University of Memphis..

Rodney Conger (BSCE 1996) married Stephanie Richardson on June 17, 1997. He is also an MSCE candidate at The University of Memphis.

Parco Upchurch, and his wife Deborah became parents of a daughter, Taylor, in June, 1997. Parco is an undergraduate student in Civil Engineering and is employed at the Ground Water Institute.

Don Fletcher (BSCE 1997) and his wife, Karen, became parents in June, 1997 of a daughter, Rebecca. He is employed by Standard Construction.

Steve Barkley (BSCE, 1979), is the Assistant vice-president, Harriman Dispatching Center for the Union Pacific Railroad. His responsibilities include overseeing coordination , execution, and effectiveness of day-to-day train operations including dispatching, corridor management, crew management, and locomotive utilization.

Brent Sutton (BSCE, 1995), is a Project Manager for the Memphis and Shelby County Port Commission. He is currently overseeing the construction of the new transportation facilities in the Frank G. Pidgeon Industrial Park.



Dennis Christansen, International President of ITE, presents the Young Consultants Award to Matthew Henry

Alumni Receives National Award

Matthew J. Henry (BSCE, 1985), was the recipient of the Institute of Transportation Engineers (ITE) Young Consultants Award for 1996. He was presented the award at the Institute's 1996 Annual Meeting in October, 1996 in Minneapolis, Minnesota. He is Associate-in-Charge of the Roseville, California office of Fehr & Peers Associates, Inc., a transportation engineering consulting firm. He received the award for a paper he prepared on transportation consulting activities.

CHAIRMAN'S CORNER

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chase library books, award scholarships, develop the curriculum, and attend to a host of other tasks central to the operation of the institution. One component of external service is community and professional leadership. Our faculty have earned recognition by serving as leaders in ASCE and Institute of Transportation Engineers (ITE) national technical activities. Their expertise has led to appointments at the local and state level to advisory boards and commissions, such as the Memphis/Shelby County Metropolitan Planning Organization, the Shelby County Water Quality Control Board, and the Tennessee Dry Cleaners Environmental Response Board. Next year, Memphis will be host to two major meetings, the ASCE Water Resources Conference and the ITE Southern District Annual Meeting.

Saving a company and the jobs of its workers and contributing to the preservation of one of Memphis' most historical places were two significant accomplishments of faculty service contributions last year.

The Tennessee Manufacturing Extension Program (TMEP) is a partnership between Civil Engineering and Tennessee industries to assist the private sector in meeting their environmental compliance requirements. With funding provided by the State of Tennessee and the federal government, faculty and students work with individual industries to apply pollution prevention measures and technologies to solve specific environmental problems. Last year Dr. Larry Moore was asked to visit a West Tennessee industry that was unable to meet the stormwater discharge permit requirements. The owner of the company stated that he had spent \$300,000 to come into compliance and was still having difficulty in meeting the Tennessee Department of Environment and Conservation regulations. Dr. Moore sampled the company's water and recommended a treatment. The industry implemented his recommendation and is now in complete compliance. The company president credits Dr. Moore with saving his company and the jobs of ten employees.

Elmwood Cemetary has been in continuous operation since 1852. Civil War generals, yellow fever victims, prominent Memphis politicians and business leaders as well as other Memphians are buried at Elmwood. Dr. John Smith offered the resources of the Groundwater Institute to establish an accurate record keeping system, to map the cemetary grounds, and to inventory the location and type of all trees. With the assistance of the ASCE student chapter, a detailed survey was performed and all data collected were entered into a state-of-the-art GIS database. As a result of Dr. Smith's leadership and the work of many students, Elmwood is developing a comprehensive tree maintenance program and can provide answers to the hundreds of history buffs who visit the cemetary each year.

We are proud of the contributions of our faculty which enhance the economic development and improve the quality of life for our state and region.

ALUMNI FEEDBACK

Please share items of interest with us and your fellow alumni. Complete and return to:
Department of Civil Engineering, The University of Memphis, Memphis, TN 38152

NAME _____

DEGREE(S) _____ YEAR(S) RECEIVED _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____ HOME ___ OFFICE ___ (check one)

EMPLOYER _____ POSITION _____

POSITIONS/ RESPONSIBILITIES _____

RECENT ACCOMPLISHMENTS _____

DESIRED NEWS OR SUGGESTIONS _____

Graduates

During the 1996-1997 academic year the department awarded 23 BSCE, 2 MSCE and 2 Ph.D. degrees. Congratulations to the accomplishments of all our graduates and best wishes from the faculty and staff.



Bachelor of Science in Civil Engineering

Scott R. Fletcher	summa cum laude
Shiu-Hoi Lam	summa cum laude
Douglas D. Duke	magna cum laude
James M. Evans	magna cum laude
Edmond B. O'Neill	magna cum laude
Shawn T. Billings	cum laude
Rodney J. Conger	cum laude
Hakan J. Hansson	cum laude
Michael W. Tapp	cum laude
Elizabeth M. Bowman	
Mary Jane Cassandras	
Gregory Dotson	
Donald T. Fletcher	
Ramona Aycock Gore	
Shane L. Hollin	
Stephanie C. Poole	



Bachelor of Science in Civil Engineering (continued)

Robert G. Rash
Stephen C. Thomas
Richard C. Thomas
Robert Justin Walpole
Tiffany Michelle White
Jesse Allen Williams
Daniel W. Wood

Master of Science in Civil Engineering

Rajan Krishnasamy
Steven Williams

Ph.D. in Civil Engineering

Dr. Guozhong Cao
Dr. Huijie Lin

Herff College of Engineering

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The University of Memphis
Memphis, TN 38152



The University of Memphis is one of 46 institutions in the Tennessee Board of Regents system, the seventh largest system of higher education in the nation. It is an Equal Opportunity/Affirmative Action University Committed to education of a non-racially identifiable student body.