

Dean Kuo to Leave COE - Dr. Wayne Davis Named Interim Dean

Dr. Wayne T. Davis has been named as the interim dean of the College of Engineering (COE) after the resignation of Dr. Way Kuo.

Davis, currently COE associate dean for research and technology, will become the interim dean effective May 10.

"Wayne has served our campus and the college for more than 30 years, and his knowledge and leadership will be the right fit for the college as we move to find the next dean," said UT Knoxville Provost Robert Holub.

Davis received his bachelor's degree in physics from Pfeiffer College (now Pfeiffer University) in Misenheimer, N.C.; a master's in physics from Clemson University and a master's in environmental engineering and Ph.D. in civil engineering from UT Knoxville.

Davis joined the Department of Civil & Environmental

Engineering as an instructor of environmental engineering in 1974 and became an assistant professor in 1975. He was named an associate professor in 1979, and became a full professor in the department in 1984. Davis also served as assistant dean of the Graduate School from 1985 to 1998 and as the school's associate dean from 1988 until 1991. He was the university's 2003 Macebearer.

Davis' research areas are air quality management and pollution control. He is a Qualified Environmental Professional and is a member of numerous professional and academic and honorary societies, including the Air and Waste Management Association, the American Society of Civil Engineers and the American Society of Engineering Educators.

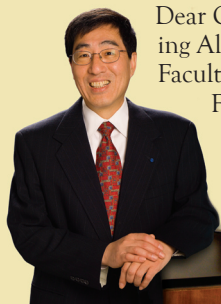
The search for a permanent COE dean is now underway, with a search committee chaired by UT Knoxville Vice Chancellor for Research and Engagement Brad Fenwick and Dr. Bamin Khomami, professor and head of the Department of Chemical and Biomolecular Engineering.

Story by Kim Cowart



Wayne Davis, Associate Dean

From the Dean's Desk



Dear College of Engineering Alumni, Supporters, Faculty, Staff, Students and Friends:

As we begin 2008, I would like to thank our faculty and staff for their hard work and dedication during this past year.

Once again, many exciting things have happened, including: the groundbreaking ceremony for the Min Kao Electrical Engineering and Computer Science (EECS) Building; the establishment of the merged EECS department, along with the appointment of its new head, Dr. Kevin Tomsovic; hosting the National Science Foundation (NSF) Conference, attended by 1,100 participants; visits by many world renowned academic leaders; and numerous accomplishments which have been highly complimented by our constituents across the country.

By now, you may have heard that I am departing the University of Tennessee for the City University of Hong Kong in May. As its next president, I am honored by City University's trust in my ability to advance their mission and academic programs. I have been here at UT for almost five years, and during that time I have been privileged to lead the College of Engineering, with contributions from many others, to make great strides in academics and outreach. For example:

- The COE has now climbed to the highest rankings ever in both the undergraduate and graduate programs, and it is now one of the most improved engineering programs in the country;
- the quality of our undergraduates is now the best in the college's history;
- the graduation and retention rates have reached the highest on record;

- COE graduate enrollment reached a record high (Ph.D. enrollment doubled); undergraduate enrollment is the highest it has been in the past 14 years;
- we now have the largest amount of capital money for new buildings in the history of the college;
- COE research expenditures have doubled and NSF awards have quadrupled;
- we have been able to make significant salary rewards and adjustments to performing faculty and staff members.

As we have implemented accountability and performance-based recognition in the college, I have enjoyed a great deal of support from the current COE and departmental leadership. I am also appreciative of the strong leadership and ongoing support from former Chancellor Crabtree, Provost Holub, the COE Board of Advisors, the campus community and ORNL administrators, researchers and staff.

During the balance of my term here, I will make certain that the college continues efficient operations, and I will maintain our high goals and standards while implementing our academic agenda, without any compromise on quality and accountability.

I trust that the college will continue to excel under the future leadership. I have enjoyed my years here in the UT College of Engineering, and I offer my best wishes for continued success to both the university and the college.

Thank you for your ongoing interest and support of our college.

Best regards,



Way Kuo
Dean of Engineering and
University Distinguished Professor

COE Hosts 2008 NSF CMMI Conference in Knoxville



Tennessee Governor Phil Bredesen opens the Welcome Ceremony for the 2008 NSF CMMI Conference. Seated at the head table (left to right) are Dr. Lee Riedinger, professor of physics and the conference co-chair; City of Knoxville Mayor Bill Haslam; UT-Knoxville Provost Bob Holub; COE Dean Way Kuo; Michael M. Reischman, Deputy Assistant Director for Engineering, NSF; and UT System President John Petersen.

The University of Tennessee College of Engineering welcomed the world to Knoxville as the host of the National Science Foundation's (NSF) Civil, Mechanical and Manufacturing Innovation Engineering Research and Innovation Conference 2008, at the Knoxville Convention Center (KCC) January 7-10, 2008.

Total attendance for this premier conference was 1,100 participants, including over 200 students. To encourage student participation in the conference, student travel grant awards were given on a competitive basis to almost 250 student applicants. Funding for these travel grants was provided by the COE, Missouri University of Science and Technology (formerly the University of Missouri-Rolla) and Arizona State University.

Conference activities included more than 500 poster presentations, in addition to workshops and plenary and breakout sessions on funding prospects, proposal writing and research needs, opportunities and best practices. NSF program directors conducted many of the sessions. The conference also provided an excellent opportunity for participants to network with other researchers and develop collaborative efforts.

An opening reception was one of the highlights of the first day's activities. Conference participants mingled with UT and COE administrators, faculty and staff in the KCC's Cumberland Concourse while enjoying delicious hors d'oeuvres and live jazz from UT music department faculty members Rusty Holloway, Mark Boling and Keith Brown.

The Opening Plenary Session took place Tuesday morning, January 8, and featured addresses by Dean Way Kuo, Provost Robert Holub, UT President John Petersen, NSF Deputy Assistant Director for Engineering Dr. Michael M. Reischman and Tennessee Governor Phil Bredesen.

In his remarks, Bredesen said that the United States needs to restore the importance of scientific endeavor in research and technology to the nation's priorities.

City of Knoxville Mayor Bill Haslam and Knox County Mayor Mike Ragsdale also made a joint presentation of a proclamation declaring January 8 "National Science Foundation Day" in the city and county.

A Message from Interim Chancellor Jan Simek

Dear College of Engineering Alumni, Donors and Friends:

By now, many of you have heard about the changes in leadership for both the University of Tennessee-Knoxville campus and the College of Engineering. I would like to take this opportunity to provide you with more information about these transitions.



**Interim Chancellor
Jan Simek**

I was asked to take on the responsibilities of interim chancellor for the UT-Knoxville campus after the resignation of Dr. Loren Crabtree in January 2008. As many of you know, I had served as Dr. Crabtree's chief of staff since 2005, and prior to that held positions as Interim Dean of the College of Architecture and Design, Head of the Anthropology Department, and Interim Director of the School of Art. I have a strong commitment to continuing the university's progress in all of our mission areas, including academics and research. The UT-Knoxville administration has an outstanding group of capable administrators in place to assist us in our work.

On Feb. 27, 2008, the search committee for the chancellor's position, chaired by Dr. Harry (Hap) McSween, a Distinguished Professor of Science and the former dean of the College of Arts and Sciences, selected the firm of Parker Executive Search to assist us in finding a new chancellor. Based on the committee's consultations with the search firm, we expect to have primary candidates selected and on campus early in the next academic year.

Also in this edition of *Tennessee Engineer*, Dean Way Kuo is providing information about his resignation from the College of Engineering to assume the presidency of the City University of Hong Kong.

I would like to express my sincere regret that Dr. Kuo will be leaving our university. He has been a wonderful leader for the college, increasing research revenue, reorganizing the college's administrative functions and updating our engineering curriculum. However, accomplished academic leaders are in demand. I would like to congratulate Dr. Kuo on his exciting new opportunity, and I know you will join me in wishing him the best when he leaves on May 9, 2008 to assume his new position.

We have assembled an outstanding search committee under the guidance of Dr. Brad Fenwick, Vice-Chancellor for Research, and Dr. Bamin Khomami, Armour T. Granger and Alvin and Sally Beaman Distinguished Professor and Head of the Department of Chemical and Biomolecular Engineering. We are also currently in the process of engaging a search firm to assist us with the process of building a candidate pool. It is our goal

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Faculty Focus

Dr. Michael Langston

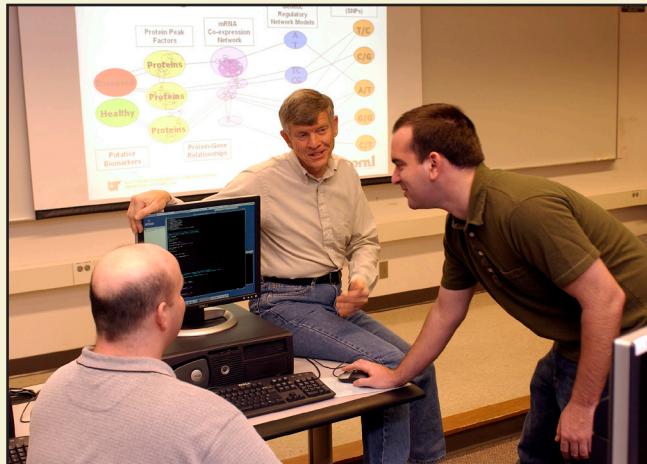
Dr. Michael A. Langston, professor in the Department of Electrical Engineering and Computer Science, has always checked the box next to mathematics when given a career choice.

"I tell my students, 'If you concentrate on learning math and learning it well, it will open doors to many other fields,'" said Langston, whose love for math has opened many doors for him over the last four decades. Mathematics has most recently helped him build collaborations with molecular biologists in using a number of powerful algorithmic tools to solve cutting-edge problems in genetics and genomics.

Computation has forever changed scientists' ability to analyze and understand genes and proteins that control a myriad of cell functions at the heart of biological systems. Nevertheless, basic questions such as "What are the driving biological networks," "How do we find them" and "How do we alter them in order to improve human health" have long seemed out of reach. Limited biological information and a paucity of analytical tools have made it difficult even to make educated guesses. But that bleak landscape is rapidly changing. By coupling new sources of high-throughput biological data with novel combinatorial algorithms and high performance computer architectures, teams of scientists such as those working with Langston can now solve problems that were until only recently considered unassailable.

"Advances in our ability to generate, interpret and decompose biological data have dramatically improved our ability to understand highly complex biological systems," said Langston. "With a single experiment, we can now produce a snapshot of how every gene in an organism responds to stimulus. Combine that snapshot with our algorithms and access to supercomputing platforms, such those furnished to my team by the Department of Energy at Oak Ridge National Laboratory, and we can routinely solve in real time problems that were previously considered hopelessly intractable. This can help biologists who formerly devoted much of their careers to working on one or a few genes now to decipher immense numbers of gene and protein interactions at the network level."

Langston views his role as a computational scientist as something of a middleman in the tool chain. Biological scientists produce data in huge supply and Langston's team employs abstraction via graph and statistical theoretical tools to eliminate noise and irrelevant data, thereby focusing on key network interactions



Mike Langston (center) discusses computational and statistical issues for biological data integration with two of his PhD students, Jeremy Jay (right) and Charles Phillips (left).

and reducing the problem to its compute core. Langston's team solves this core with their most efficient methods implemented on the fastest computational resources and are thus able to deliver relatively small and highly distilled solutions, such as sets of genes and proteins, back to the biological scientist, who is then able to complete the study and verify novel results with more traditional "wet lab" techniques.

"Such verification remains expensive and time consuming," said Langston. "By its nature it is highly infeasible without the computational component we provide, because otherwise there are overwhelmingly too many candidate solutions to consider."

Langston has devised novel tools to solve applied graph theoretical problems for over 25 years, and it is not surprising that he is one of the most visible people leading efforts to integrate new discrete mathematical techniques with high performance computational approaches to solve complex biological problems. Because Langston's work is in much demand around the globe, he has research contracts in several countries and travels as much as 200,000 miles each year to work with other scientists in order to delve deeper into human and other genomes.

"Student recruiting is also a major goal of my travels," said Langston, who considers himself an international ambassador for the university.

A typical example of his collaborative efforts is centered in Göteborg, Sweden, where Langston works as co-principal investigator on one of two contracts from the European Union.

"Scandinavia has a rich history of producing excellent twin data, specifically on monozygotic or so-called 'identical' twins," said Langston. "The question we want to answer is why is it that two individuals, born with the same DNA and raised in the same environment, are

Faculty Updates



Dr. Way Kuo

Dr. Way Kuo, dean of engineering and a University Distinguished Professor, was elected as a Foreign Member of the Chinese Academy of Engineering (CAE) on a new members list that was announced December 29, 2007. A membership in the CAE is the highest academic title in engineering science and technology in China.

Established in 1994, the Chinese Academy is the most prestigious and authoritative advisory institution in the nation's engineering and science field.

Dr. Kevin Tomsovic has been named head of the University of Tennessee's Department of Electrical Engineering and Computer Science (EECS).



Dr. Kevin Tomsovic

Tomsovic, who earned both his M.S. and Ph.D. in electrical engineering from the University of Washington, recently replaced interim head Dr. Luther Wilhelm.

Prior to coming to UT, where he will also serve as the CTI Chair in the EECS department, Tomsovic was a professor at Washington State University. From 2004-2006, he served as the program director for the Division of Electrical and Communication Systems for the National Science Foundation.

Dr. Mingjun Zhang has recently joined the University of Tennessee's Department of Mechanical, Aerospace, and Biomedical Engineering. Prior to coming to UT, Dr. Zhang worked in the Life Sciences and Chemical Analysis Division at Agilent Technologies in California.



Dr. Mingjun Zhang

Zhang was the first recipient of the Early Career Award (Government/Industry) by the IEEE Robotics and Automation Society in 2003 and is currently the associate editor for the IEEE Transactions on Automation Science and Engineering.

UT Associate Vice President for the University of Tennessee Space Institute **Dr. Don Daniel** will retire in May of 2008.

Before joining UTSI, Daniel served as a research engineer with Boeing and worked for 30 years with the Department of the Air Force. He has also served as chairman of NATO's research and technology board.

Daniel joined UTSI in 2006 after being selected in a national search to lead the organization.



Dr. Don Daniel

Continued on page 5

RESEARCH notes

Dr. Brian Edwards Pioneers Polymers Research

"Almost everything has polymers in it," said Dr. Brian Edwards of the University of Tennessee's Department of Chemical and Biomolecular Engineering (CBE). "The carpet, the walls, the desk you're writing on, they all contain polymers."

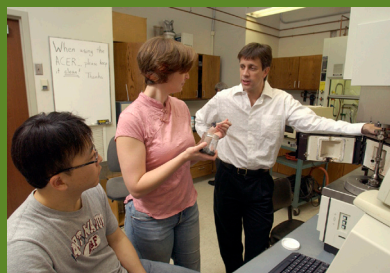
In addition to its current utilitarian popularity, Edwards sees much more in the future of polymers. Advanced polymers could improve solar cells, semiconducting materials and fuel cells, just to name a few.

"In order to get there, however, we have to understand polymers," added Edwards.

This quest to understand the fundamental nature of polymers is one task currently occupying Edwards's mind. In addition to the traditional scientific tools of theory and experiment, Edwards uses supercomputers to help model and simulate the structures of new polymers, greatly reducing the time (and money) involved in materials research. Ultimately, he seeks to expedite an understanding of polymers so that they can be manufactured more efficiently and their potential can be fully realized.

But there is more to Edwards than just polymers. He is also currently engaged in a project with the Air Force Office of Research to design novel lubricants for extreme environments, such as the severe cold of the arctic, where traditional lubricants tend to freeze up. These high-tech substances have a variety of applications, such as in aircraft and service vehicles in the arctic.

For this project, Edwards has teamed with Dr. David Keffer, an associate professor in the CBE department, and Dr. Jamie Adcock, a professor in the Department of Chemistry. Again, computers play an important role in expediting the research. The team uses molecular dynamics simulations on supercomputers to estimate the properties of various lubricants.



Dr. Brian Edwards (right) discusses research results with students Rhea Sammons (center) and Jun Mo Kim (left) in his lab.

"Adcock synthesizes the compounds and experiments are conducted to measure the properties that were simulated—simulations of different lubricant molecular architectures can be examined through [computer] simulation

alone, allowing for a very large number of potential lubricant compounds to be virtually tested, rather than synthesizing these compounds and then testing them, which is a very time-consuming and expensive process," Edwards said.

Finally, Edwards is studying proton exchange membranes for possible use in automotive fuel cells. These cells could potentially revolutionize our automobiles, greatly reducing harmful exhaust and severing dependence on foreign oil. Nafion is the standard polymer used in these membranes, and efforts have not been made to find newer, more efficient polymers in thirty years. By using supercomputers at Oak Ridge National Laboratory (ORNL)—the project is sponsored by the Department of Energy (DOE)—Edwards hopes to find more efficient polymers for modern fuel cells, perhaps bringing the United States one step closer to a cheaper, greener future.

Edwards also uses Newton, a University of Tennessee computing cluster, and facilities at the National Center for Supercomputing Applications at the University of Illinois for all of his projects, allowing him to more efficiently create the everyday products of tomorrow.

Edwards certainly has a lot on his plate these days, and there is little doubt that the results of his research will someday be a part of everything, including the carpet and the walls.

Story by Scott Jones

Dr. Wes Hines Demonstrates Value of Reliability Engineering

Dr. Wesley Hines does important work. He saves money and, quite possibly, lives.

Hines is in the business of prognosis, or predicting the "remaining useful life" or "time to failure" for complex machine systems, such as oil rigs and nuclear power plants.

"Every time one of these engineering marvels shuts down you're losing money, and lots of it," said Hines.

Along with his fellow researchers, Hines has developed a series of algorithms that give engineers and device operators crucial information on how to proceed in uncertain situations. For example, his recent work with BHI, a large multinational corporation, helped that company to greatly improve its strategy for drilling oil wells.

Thirty percent of the time, said Hines, BHI engineers encounter a problem (usually a very expensive one) before they hit their target depth. He estimates that every time something breaks on an oil drill, the company is losing approximately \$500,000 in loss of drilling time alone.

"Companies who have to deal with these problems want methods to monitor equipment and detect anomalies," said Hines.

The drill bits on these massive diggers contain memory chips that collect data on the progress of the dig and the status of the equipment.

"However, previously they could never efficiently utilize the data," Hines added. "Now, with these algorithms, they have the capability."

BHI will soon be using Hines' algorithms at all of its maintenance sights. These same algorithms, said Hines, could theoretically be used in long-flight space vehicles, civilian aircraft, nuclear power plants, and countless other areas.

"Think of your car," said Hines. "If you know you've got bad brakes, you probably shouldn't go 80 miles per hour. However, you might get away with 40 miles per hour, at least for a time. It's the same with airplanes, power plants, and all the rest. You need to know what you can get away with in order to plan your strategy and save money, and in the case of airplanes and long-flight space vehicles, possibly lives."

Hines recently collaborated with the National Energy Policy Research Institute (NEPRI) to help power plants prolong the lives of their aging components. The majority of these plants are over 40 years old, said Hines, adding that their operators would like to get at least 20 more years out of them.

"You need to know the life left of the equipment," he said, alluding to his research.

Hines also works on a program to develop advanced prognostic sensors for small-to medium-sized nuclear reactors to be deployed in Third World countries, where a lack of infrastructure makes remote operation necessary. In order for remote operation to be successful, advanced sensors for performance and prognosis are necessary.

However, oil rigs and power plants are just two of the many possible beneficiaries of Hines' research. He points out that Delta Airlines uses similar algorithms to monitor engines on their aircraft and Sun Microsystems uses them to keep an eye on their servers. Furthermore, the federal government has declared that the Department of Defense's next generation of fighter jet, dubbed the Joint Strike Fighter, needs prognostic capabilities; capabilities that could very well take advantage of Hines' algorithms. NASA has likewise expressed interest in Hines' work for use in its long-flight vehicles, where algorithms could allow machines on lengthy missions to repair themselves.

As Hines continues to improve on his work, new uses for his research continue to be found, whether the problems are hundreds of feet underground or millions of miles out in space.



Dr. Wes Hines (right) and his student Jamie Garvey (left) collaborate on a project.

Story by Scott Jones

Faculty Focus *(continued from page 3)*

"The question we want to answer is why is it that two individuals, born with the same DNA and raised in the same environment, are concordant in their response to pollen and other allergens until they are a few years old and then, in many cases, they become discordant, with one but not the other developing a severe allergic response? That this happens at all may seem surprising to the layperson, but there are useful randomizations built into our immune systems that help to explain this behavior. With the high quality data we are receiving from Sweden, we are beginning to unravel the breakdown in gene network feedback mechanisms that appear to be root causes for allergen sensitivity and that will eventually, we hope, lead to better treatments."

Langston received his Ph.D. in computer science from Texas A&M University in 1981. Before coming to UT, he worked at Washington State University, the University of Illinois and the European division of the University of Maryland. He has authored over 200 refereed journal articles, conference papers, book chapters and other reports and served on a variety of editorial boards, including the Association for Computing Machinery's flagship publication, *Communications of the ACM*. Throughout his career, Dr. Langston has received honors for duty, teaching, research and service. Most notable among these are the Commendation Medal from the U.S. Army in 1979; the Distinguished Teaching Award from Texas A&M University in 1981; the Chancellor's Award for Research and Creative Achievement from UT in 1994; and the Distinguished Service Prize from ACM Special Interest Group on Algorithms and Computation Theory in 2001. The Department of Defense, Department of Energy, the National Science Foundation, the Australian Research Council, the European Union and a variety of other funding agencies have supported Langston's work.

Langston's three children, Glen, Katie and Keith, said when growing up that they had watched how hard dad worked and never wanted to emulate his example. Nevertheless, all three graduated from UT and wound up with scientific careers (biomechanical engineering, chemistry and computer science, respectively).

"I guess it must be in the genes somewhere," said Langston with a wink as he proudly shared his children's achievements. Ina, his wife of over 32 years, is also a UT graduate and works as an assistant principal at a local elementary school.

"We have great students here at UT," said Dr. Langston, who loves working with students at the university level. "Working alongside them helps keep you young...and relevant!"

Having the freedom to work on his own research agenda appeals to him, as does the flexibility to travel and collaborate with others as needed. "I like calling my own shots," said Langston.

"This is a wonderful time to be a scientist. We are confronted with an exciting confluence of emerging technologies that give us new problems and, hopefully, new solutions every day," said Langston.

Story by Amanda Womac

Chancellor's Message *(continued from page 2)*

to find the best dean possible for the engineering college, and we will continue in this search until we have found a candidate that meets that criterion.

The interim dean, Dr. Wayne Davis, who has served the college for over 30 years, and the COE administrators, faculty and staff remain committed to continuing the college's advancement.

We will continue to keep you informed about the progress of both the chancellor and dean's searches, and we value your input and comments. Please direct any correspondence to coe@utk.edu.



Jan F. Simek
Interim Chancellor
The University of Tennessee, Knoxville

Zachariah Named UT Vice President of Science and Technology

Dr. Thomas Zachariah, the UT-Battelle distinguished professor in the Department of Electrical Engineering and Computer Science (EECS), was recently appointed as the University of Tennessee's new vice president for science and technology. In addition to this new role, Zachariah will continue to act as the associate laboratory director for computing and computational sciences at Oak Ridge National Laboratory (ORNL).



Dr. Thomas Zachariah

"This new appointment helps to advance joint research activities," said Zachariah.

"While there are now a number of joint UT/ORNL faculty positions, I would like to see the number of these positions increase, fostering more cooperation and collaboration."

"While the College of Engineering has strong departments and a great faculty, there is the potential to make it even stronger, primarily through more interaction between students and faculty via mentoring and programs such as internships at both the UT and ORNL campuses," Zachariah said.

Zachariah also points to the University of Tennessee Space Institute (UTSI) as another great collaborating opportunity that could further strengthen the college.

"Dr. Zachariah's appointment as UT vice president for science and technology also provides a unique opportunity for maximizing the extraordinary assets generated through this partnership," said UT System President John Petersen.

Building bridges between UT and ORNL is a role familiar to Zachariah. In 2007 he led the effort to bring one of the world's most powerful supercomputers to the Joint Institute for Computational Sciences, a collaboration between UT and ORNL, resulting in a \$65 million award from the National Science Foundation.

"Researchers need increasingly powerful computing resources if they are to deliver the breakthroughs that society demands in climate science, energy research, and other fields," Zachariah said. "This award will guarantee that we are able to deliver those resources."

The award is the largest research grant ever received by the University of Tennessee. The new partnership, to be led by UT, is called the National Institute for Computational Sciences (NICS), and will facilitate the use of the new supercomputer, to be housed at Oak Ridge National Laboratory.

Zachariah received his B.S. in mechanical engineering from India's Karnataka Regional Engineering College, his master's degree in material science from the University of Mississippi, and his Ph.D. in engineering science from Clarkson University in 1987.

In the next edition of

TENNESSEE
engineer

Information about Homecoming 2008

Save the date!

Saturday, November 8, 2008

COE Student Named Co-op of the Year Finalist

Hillary Holback, senior in chemical engineering, was recently recognized as a 2007 Co-op of the Year finalist for her outstanding contributions to Eastman Chemical Company. The award, sponsored by the Cooperative Education Division of the American Society of Engineering Education (ASEE), is a national recognition, and members of the ASEE's Cooperative Education Division select nominees.

Dr. Doug McWilliams, who works with Eastman's Specialty Polymers Technology Division, nominated Holback for the award.

"Hillary worked with me on a project related to the development of biaxially-oriented copolyester films as a dielectric film for flexible circuits," said McWilliams. "The project was recognized as important on a corporate level, and Hillary's work was important to fundamentally understand the effects of a process conditions on the performance of our material. It was an ambitious project to complete, but Hillary is a fast learner and began to contribute quickly."

When Holback first began her education in chemical engineering at the University of Tennessee, she felt her career path was set in stone.

"Initially, I thought I'd go to college, earn my degree in chemical engineering and work in industry," said Holback. However, after deciding to co-op through UT's Office of Professional Practice in order to gain job experience, Holback felt very differently about what she wanted from life.

"After four years of experiences, I realized that I don't have to be like everyone else. I came to understand that not everyone who obtains a particular degree uses it for the same expected end," said Holback. "Looking back at my initial and current perspectives on my career path, the drastic change could be considered a metamorphosis. In actuality, I attribute gradually figuring out what profession suits me to my co-op experiences."

Holback worked four different co-op assignments with Eastman Chemical Company, one of which took her to Workington, England, for a month during the summer of 2006. While working in the Global PET Technology division of Eastman's England facility, Holback, under the leadership of Emily Frasier, approximated flow rates and estimated vessel sizes required for production of a new additive and created conceptual drawings for the new additive system.

"I would not have had the opportunity to explore another part of the world in a business setting had it not been for Eastman," said Holback. "The experience in England has encouraged me to do research or work abroad for a couple of years because I understand the importance of being versatile, both culturally and professionally."

Before coming to UT, Holback received an International Baccalaureate diploma from Wilson High School in Florence, S.C. During her time there, she studied the influence of colored plastic mulches on plant chemistry during an apprenticeship with the USDA Agricultural Research Service Coastal Plains Research Center. The previous year, Holback again worked as an apprentice, but this time with the Department



Hillary Holback (center, right) is congratulated for her honor by (left to right) Bamin Khomami, head of the Department of Chemical and Biomolecular Engineering; Masood Parang, Associate Dean for Student Affairs; and Walter Odom, Director of the Office of Professional Practice.

Irick Develops Legacy Engine

Dr. David "Butch" Irick, research assistant professor in the Department of Mechanical, Aerospace and Biomedical Engineering, is working with Power Source Technologies to develop a simple and unique high-torque rotary engine with a myriad of military, industrial and commercial applications. The engine, dubbed "the Legacy," is a dream of Mr. Bart Watkins, chairman and chief executive officer of Power Source Technologies, whose partners include the University of Tennessee, Oak Ridge National Laboratory and Oak Ridge Tool-Engineering, Inc. The company's mission is to revolutionize the design of the internal combustion engine. According to Irick, a few of the engine's attributes include more horsepower per pound of engine weight; a 25 percent lower production cost because of fewer and simpler components; ability to use most any fuel more efficiently; and reduced emissions due to the efficient manner in which it burns fuel. Irick believes the Legacy could be brought to market much more easily than fuel cell vehicles because it is near-term technology and can use much of the same diesel technology that exists now for fuel injection and peripheral functions. Both Watkins and Irick believe applications for the Legacy engine are unlimited.



Dr. Butch Irick (left) works on the Legacy Engine. Photo by Michael Patrick, Knoxville News-Sentinel

Story by Amanda Womac

of Theoretical and Applied Mechanics at Cornell University.

After graduation this spring, Holback plans to study pharmaceutical science on the Ph.D. level in order to reach her ultimate goal: a career in research and development.

"I no longer see my career as being set in stone," said Holback. "These last few years have shown me that I cannot always foresee the contributions I may one day provide in my profession, in the same way that co-oping made unexpected contributions to my career decisions."

"The Office of Professional Practice is thrilled with Hillary's honor and with her success in our program," said OPP Director Walter Odom. "We hope other students

will take advantages of our international opportunities in the future."

For more information on the Office of Professional Practice's co-op and internship opportunities, visit <http://www.coop.utk.edu> or contact the OPP by phone at (865) 974-5323.

Story by Amanda Womac

College of Engineering Celebrates Excellence at 2007-2008 Honors Banquet

The University of Tennessee College of Engineering 2008 Honors Banquet took place on Tuesday, April 8 in the University Center Ballroom. The theme for this year's event was "A Legacy of Accountability."

COE Dean Way Kuo welcomed guests and announced his departure from the college May 9 to assume the presidency of City University of Hong Kong. He expressed his appreciation to the staff, faculty and students of the college for their hard work and dedication during his tenure at UT.

UT-Knoxville Provost Bob Holub praised Kuo in his comments for the extensive progress that the college has made during the past four years, and announced that Associate Dean for Research and Technology Wayne Davis would serve as interim dean.

The Outstanding Support Staff Award, presented by Associate Dean for Academic Affairs Alberto Garcia, was the first recognition of the evening. William Holloway, Materials Control Supervisor in the Department of Materials Science and Engineering, received the award.



COE Faculty Awards

Garcia also presented the faculty awards, which included: Dr. Claudia Rawn, Department of Materials Science, Outstanding Faculty Advisor Award; Dr. David Keffer, Department of Chemical and Biomolecular Engineering, Allen & Hoshall Award; Dr. Peter Liaw, Department of Materials Science, Moses

E. and Mayme Brooks Award; Will Schleter, Engineering Fundamentals Division, Leon and Nancy Cole Superior Teaching Award; Dr. Robert "Pete" Counce, Department of Chemical and Biomolecular Engineering, Charles Edward Ferris Award; and Dr. Tse Wei Wang, Department of Chemical and Biomolecular Engineering, the COE Teaching Fellow

Award, which was accepted by her husband, Dr. Doug Birdwell from the Department of Electrical Engineering and Computer Science.

Davis announced the 2008 Research Fellow Awards: Dr. Hahn Choo, Department of Materials Science and Engineering; Dr. Chris Cox, Department of Civil and Environmental Engineering; Dr. Ali Fathy, Department of Electrical Engineering and Computer Science; Dr. Bin Hu, Department of Materials Science and Engineering; Dr. David Keffer, Department of Chemical and Biomolecular Engineering; Dr. Michael Langston, Department of Electrical Engineering and Computer Science; Dr. Hairong Qi, Department of Electrical Engineering and Computer Science; Dr. John Schwartz, Department of Civil & Environmental Engineering; and Dr. Larry Townsend, Department of Nuclear Engineering.



COE 2008 Research Fellows

Associate Dean for Student Affairs Masood Parang presented the student awards, which included the Eastman Chemical Company Chemical Scholar for 2008, awarded to Shelley Elise Parker. The Tau Beta Pi Awards went to Kourtney Henderson, senior, Department of Mechanical, Aerospace and Biomedical Engineering and to Margaret Cunningham, junior, Department of Nuclear Engineering. The Peter Barile Sr. Design Competition Awards were given to Charles Greg, Rachel McCord and Joel Riddle, graduate students in the M.S.-M.B.A. program, who received the first place honor; second place went to Bryan Bollinger, Jeffrey Earp and Russell Goss, who are also graduate students in the program. Parang also recognized the Office of Professional Practice Ambassadors and the COE Ambassadors.

The evening ended with a standing ovation for Kuo in recognition of his outstanding leadership during the last four years.

Story by Kim Cowart

NSF Conference *(continued from page 2)*

After the opening session, Dr. Lee Riedinger, professor of physics at UT and one of the conference co-chairs, introduced the keynote speaker for Tuesday morning's opening session, Dr. Jeffrey Wadsworth, Executive Vice President for Global Laboratory Operations, Battelle Memorial Institute. Wadsworth is also the former director of Oak Ridge National Laboratory (ORNL).

Conference attendees had the option of attending technical tours showcasing the research projects and capabilities of select labs at UT, two facilities of Siemens Molecular Imaging Inc., ORNL (the Spallation Neutron Source and the supercomputer) and the Y-12 National Security Complex (Calutrons and Gantry Mill). The response from tour participants indicated that the tours were an extremely positive experience and a definite high point of the event. Over half of the conference attendees participated in the tours.



Rebecca Hartman-Baker of the National Center for Computational Science guides a tour of the facility for NSF conference visitors. A large percentage of conference attendees participated in the technical tours.

Wednesday, January 9, over 700 conference participants and COE administrators and faculty attended the Conference Banquet. Dr. Peter Liaw, John Fisher Professor and Ivan Racheff Chair of Excellence in the

Department of Materials Science and Engineering and the other conference co-chair, welcomed guests to the event. Kim Cowart, COE communications director and the conference facilitator, introduced the banquet speaker, East Tennessee filmmaker and director Keith McDaniel. McDaniel discussed his award-winning documentary film, "Secret City: the Oak Ridge Story" and showed clips of the documentary during his remarks.

Sponsors for the conference included the National Science Foundation; the UT College of Engineering; ORNL; Dow; DuPont; Eastman; and Shaw Industries.

"This historical event not only provided a valuable conference experience to attendees, but also brought national attention to the exceptional research and educational resources at UT, the college and ORNL," said Kuo.

Story by Kim Cowart

Alumnus Spruell Driver Believes in the Power of an Engineering Degree

Although Spruell Driver does not work directly in the engineering field, he knows the value of a degree from the University of Tennessee College of Engineering: "priceless."

Driver, who graduated in 1987 with a degree in industrial engineering, is currently an attorney with the law firm of Waller, Lansden, Dortch & Davis LLP. Driver's practice focuses on commercial real estate law, and he is responsible for working with business clients in all types of commercial real estate transactions, including acquiring, developing, selling and/or leasing property.

Driver was born and raised in Nashville, Tenn. When he began looking at universities, it was the Minority Engineering Scholarship Program (MESP) that attracted Driver to the University of Tennessee.

"The program was second to none," said Driver. "Equally attractive was the tremendous array of corporate partners, such as my co-op employer, Eastman Chemical Company, who underwrote the scholarship and provided engineering co-op assignments to scholarship recipients. The MESP had been in existence for almost 10 years when I enrolled as a freshman, and it had a very successful track record under the leadership of Mr. Fred Brown, the director, and Dr. Andrew Spickard, who was the assistant dean of engineering at that time."

Driver chose to major in industrial engineering and was impressed by the mentoring he received from many COE administrators and faculty.

"I remember people like engineering professors Hal Aiken and Dan Doulet from the Department of Industrial Engineering (IE) as well as Osama Solomon from the Department of Engineering Science and Mechanics, and of course Dr. Bill Snyder, who was dean of the college at that time," added Driver. "They really helped us to excel in our engineering studies."

After receiving his bachelor's degree, Driver, who was also named as a UT Torchbearer, the highest honor for UT students, decided to attend Duke Law School, where he received a law degree in 1991.



Spruell Driver is a strong supporter of UT, and served as president of the University of Tennessee Alumni Association in 2004-2005

After graduating from Duke Law School, Driver accepted a position as a corporate attorney with

Eastman Chemical Company in Kingsport, Tenn. He returned to Nashville in 1996 as an attorney with Baker, Donelson, Bearman & Caldwell, P.C. In 1998, Driver was named a legislative attorney for the Tennessee General Assembly and served as Special Counsel to the Speaker of the House of Representatives, working closely with many House committees and caucuses.

Driver was chosen as director for the Judicial Education and Program Services Division of the

Administrative Office of the Tennessee Supreme Court in 2000, where he managed statewide programs related to dispute resolution, judicial education and court improvement and reporting services. He returned to private legal practice in 2002.

Driver has been a strong supporter of the University of Tennessee, serving as president of the UT National Alumni Association in 2004-2005. He traveled throughout the state and beyond, representing the university's more than 300,000 alumni. Driver also served as National Chair of the association's Annual Giving Program in 2005-2006 and was also member of the COE Board of Advisors.

"The education that I received from UT was priceless," said Driver. "I appreciate the difference it made and continues to make in my life, and I want to do all that I can to help ensure that future generations of students can reap the rewards of the outstanding educational opportunities available at UT."

Driver was the commencement speaker for the University of Tennessee's 2007 Winter Commencement Ceremonies. When asked what he would say to today's engineering students, he offers the following:

"First, master the fundamentals of your engineering course of study. Second, but no less important, hone your written communications skills by taking additional coursework beyond that traditionally required for engineering students. Third, read the book titled *The World is Flat* and find a way to spend a semester studying and living abroad. American

"The education that I received from UT was priceless. I appreciate the difference it made and continues to make in my life, and I want to do all that I can to help ensure that future generations of students can reap the rewards of the outstanding educational opportunities available at UT."

—Spruell Driver



Spruell Driver served as the speaker for UT's 2007 Winter Commencement Ceremony.

professionals in all disciplines must continuously strive to gain a better understanding of the new world economy in which we must compete."

Driver lives in Nashville with his wife, Elaine Willis Driver, a 1985 UT graduate, and their two children Elise, 8, and Spruell III, 2.

Story by Kim Cowart

The Campaign for Tennessee

The University of Tennessee will publicly announced The Campaign for Tennessee, a major \$1 billion fundraising initiative that includes all UT campuses and institutes, on April 17th, 2008. The College of Engineering is a major component of the university's efforts with a goal of \$75 million. This goal is itself part of further college funding needs that total \$193 million. Gifts to the college through the campaign—and the transformative change they will accomplish—will only be achieved as we engage our alumni, corporate partners and other friends of engineering to invest with us for the future.

So where are we and what does it mean? The college has reached 47 percent of its campaign goal with 3 years, 9 months to go. This is nothing short of amazing considering that the engineering development office has been seriously understaffed for several years. The college's progress to goal is a tribute to the passion our alumni, current and former faculty and other friends have for engineering. You recognize the national imperative for engineering education and you clearly understand that private support is a significant force that will propel our momentum.

To this end, the Development Office is working rapidly to staff the office with three professionals who will be on the road making connections to philanthropic partners—alumni, companies and others. Dorothy Barkley Bryson, Associate Vice Chancellor for Development and a UT fundraising veteran, accepted the position of Interim Senior Director effective February 1. Dorothy's move to 120 Perkins has put a face and immediate energy towards the college's efforts. A search for a Director and Assistant Director has resulted in excellent candidates and hiring is imminent.

Our campaign goals reflect immediate priorities that will advance the UT COE.

Faculty Support: Our faculty members fuel success by preparing students for creative problem-solving and supplying innovations to benefit society. Support for faculty ensures a true standard of excellence.

Student Support: Scholarships and Fellowships enable us to support students who will shape the future of the world. Our ability to attract top students is a key factor in our academic reputation.

Program Support: An infusion of funding supports the underlying work of our co-op, diversity, and international initiatives.

Facilities Support: To be fully effective our new buildings must be outfitted with state-of-the-art infrastructures that advance teaching and technologies.

Your investment in the UT College of Engineering is making a difference. For more information about creating an endowment, giving through estate plans, or ways to give stocks and other appreciated assets please contact:

Dorothy Barkley Bryson
Associate Vice Chancellor and
Interim Senior Director
120 Perkins Hall
Knoxville, Tennessee 37996
865-974-2779



Dorothy Barkley Bryson

Story by Dorothy Bryson and Kim Cowart

Check out the
College of Engineering's
online newsletter

TENNESSEE
engineer
online

<http://www.engr.utk.edu/tnengr/index.html>

College of Engineering • Board of Advisors

Dr. Bert Ackermann Jr.
(BS/ME '65, MS/NE '67, PhD/NE '71)
CEO, SPINLAB
Knoxville, Tenn.

Mrs. Karyl Bartlett
(BS/ME '84, MBA '00)
Director, Composite Manufacturing Center
The Boeing Company
Seattle, Wash.

Mr. Howard E. Chambers
(BS/ME '64)
VP/GM The Boeing Company Foundation
Seal Beach, Calif.

Dr. Tom F. Cheek Jr.
(BS/EE '61, PhD/EE '69)
Vice President of R & D
Epic Systems, Inc.
Dallas, Texas

Mrs. Nancy C. Cole
(BS/ME '73, MS/ME '88)
Engineering Consultant
Fernandina Beach, Fla.

Mr. Joe C. Cook Jr.
(BS/IE '65)
Founder and Principal
Mountain Group Capital, LLC
Nashville, Tenn.

Dr. Mark E. Dean
(BS/EE '79)
IBM Fellow and Vice President
Almaden Research Center
San Jose, Calif.

Mr. Dennis A. Deniham
(BS/ChE '72)
Retired
Shallotte, N.C.

Dr. R. G. Gilliland
(BS/ChE '58, MS/MetE '63)
Retired
Pittsburgh, Pa.

Mr. Ron Green
(BS/EPh '70, MS/EPh '78)
Chairman
ADVATECH, LLC
Charlotte, N.C.

Mr. Michael W. Howard
(BS/EE '80, PhD '96)
Senior VP R & D
Electric Power Research Institute
Charlotte, N.C.

Mr. Dwight N. Hutchins
(BS/ChE '86)
Partner
Accenture
Washington, D.C.

Mr. Steven D. Lucas
(BS/CE '81, MA/CE '83)
COO
Denark Construction, Inc.
Knoxville, Tenn.

Dr. H. Lee Martin
(BS/ME '78 PhD/ME '86)
Managing Member
Clarity Resources, LLC
Knoxville, Tenn.

Mr. Edwin A. McDougale
(BS/CEE '69, MS/CEE '75)
Principal
Ross Bryan Associates, Inc. Engineers
Nashville, Tenn.

Mr. Mark A. Medley
(BS/ME '69, MBA/Ind. Mgmt., '70)
President and CEO
Control Technology, Inc.
Knoxville, Tenn.

Mr. Andrew K. Phelps
Vice President and
Deputy General Manager
Bechtel Jacobs Company, LLC
Oak Ridge, Tenn.

Mr. James B. Porter Jr.
(BS/ChE '65)
Vice President of Engineering and
Operations
E.I. DuPont de Nemours Corp.
Wilmington, Del.

Mr. Richard T. Snead
(BS/IE '73)
President and CEO
Carlson Restaurants Worldwide
Carrollton, Texas

Mr. Eric L. Zeanah
(BS/IE '84)
President/Owner
American Accessories International
Knoxville, Tenn.

1930s

Louis King (BS/EE '38) received the National Association of Broadcasters 2007 award for engineering achievement. He lives in Bristol, Tenn.

1960s

Richard Anderson (BS/IE '65) joined Barge Waggoner Summer & Cannon Inc. in the firm's Oak Ridge office. He lives in Maryville, Tenn.

Ralph Baldock (BS/IE '69; MS/IE '79) was awarded the Fellow Award in 2006 by the Institute of Industrial Engineers. He lives in Kingsport, Tenn.

1970s

Sirikalaya Suvachittanont (BS/ChE '76) is an associate professor at Kasetsart University and an Energy Conservation Consultant in Thailand.

Dr. William Vaughan (PhD/ES '76) received the AIAA Distinguished Service Award. He lives in Huntsville, Ala.

1980s

Brian Mahoney (BS/CE '82; MA/CE '84) was elected to Barge Waggoner Summer & Cannon's board of directors. He lives in Powell, Tenn.

Richard Egli (BS/NE '83) traveled to Beijing, China, with other Nuclear Regulatory Commission staff members to provide technical training to the Chinese on the Westinghouse AP 1000 Nuclear Reactor design. He lives in Charleston, Tenn.

Antho Harden (BS/CE '83) was promoted to director of preconstruction with BE&K Building Group. He lives in Pelzer, S.C.

Michele Gordon Branton (BS/NE '84) is deputy assistant manager for science for the Department of Energy's Oak Ridge office. She lives in Powell, Tenn.

Dr. K. Scott Malone (BS/ES '85) is the lead team physician for Fort Valley State University. He lives in Macon, Ga.

Melvin Kirk (BS/IE '87) is a Business Process Manager with General Electric. He lives in Atlanta, Ga.

Misty Mayes (BS/IE '88) received two awards, Woman-owned Small Business Contractor of the Year and Small Business Service Firm of the

Year for Fiscal Year 2006 from the Department of Energy. She lives in Knoxville, Tenn.

Charles McNeil (BS/AE '89) joined Rolls Royce Corporation as senior specialist mechanical engineer. He lives in Monrovia, Ind.

1990s

Joshua Gerkin (BS/CE '98) was promoted to account executive with FM Global's Cleveland Operations in North Olmsted, Ohio. He lives in Medina, Ohio.

Lorie Pettus Jones (BS/ME '98) was promoted to continuous improvement manager at Graphic Packaging International Inc. in Lawrenceburg, Tenn. She lives in Ethridge, Tenn.

Kevin Parish (BS/EE '98) was promoted to lead power systems engineer at Progress Energy and currently works in the Plant Construction Department. He lives in Garner, N.C.

Dr. Neal Oldham (BS/MSE '99) was recently hired as a Senior Process Engineer at Apple, Inc. He lives in San Jose, Calif.

2000s

Dr. Pamela Murray Moor (BS/ME '00, MS/ME '01, PhD/ME '07) is a technical project manager at Y-12 National Security Complex in Oak Ridge, Tenn. She lives in Knoxville, Tenn.

Jeremy Smith (BS/AE '02) earned a master's degree in aeronautical engineering from the Air Force Institute of Technology and was transferred to Eglin Air Force Base to be an aircraft store separations engineer. He lives in Fort Walton Beach, Fla.

Chad Ott (BS/AE '03) is serving with the First Battalion, 508th Parachute Infantry Regiment, 82nd Airborne Division in Afghanistan as the battalions signal officer.

Memorials

Wilson Tucker (BS/ChE '38) died February 21, 2008. He lived in Rock Hill, Tenn.

Thomas Mackey (BS/ChE '43) died February 17, 2008. He lived in Bearden, Tenn.

Major Joseph Owen (BS/CS '47) died March 3, 2008. He lived in Knoxville, Tenn.

Charles Denny Armstrong (BS/ME '50) died December 19, 2007. He lived in Farragut, Tenn.

William Sallee Sr. (BS/EE '50) died February 25, 2008. He lived in Clinton, Tenn.

Robert Alber Williamson (BS/ChE '50) died February 22, 2008. He lived in Oak Ridge, Tenn.

Boyd Neblett (BS/EE '52) died September 29, 2007. He lived in Huntsville, Ala.

Jeff Cutcher Jr. (BS/ME '57) died September 5, 2007. He lived in Knoxville, Tenn.

Bobby Roberts (BS/ME '59) died March 15, 2008. He lived in Athens, Tenn.

James Harrell Jr. (BS/ChE '60) died May 10, 2007. He lived in Wayne, Pa.

Michael Bamberg (BS/ME '65) died October 1, 2007. He lived in Birmingham, Ala.

Edwin Edgar Morton III (BS/EE '70) died February 10, 2008. He lived in Knoxville, Tenn.

Ronald E. Jones (BS/Engr. '73) died January 30, 2008. He lived in Lexington, Ky.

COE Graduate is Named Brigadier General with Command of 455th Air Expeditionary Wing

On March 12, 2008, Knoxville native and COE electrical engineering alumni, Colonel James Michael "Mike" Holmes, was promoted to brigadier general and took command of the 455th Air Expeditionary Wing from Brig. General. James Hyatt during a change-of-command ceremony at Bagram Air Base, Afghanistan.



General Holmes

Holmes grew up on the UT dairy farm and attended Knoxville's West High School. During his years as a UT engineering student, Holmes took part in a co-op program and worked with NASA engineers at Kennedy Space Center at Cape Canaveral, Fla., where he became interested in military flying.

After receiving his engineering degree in 1981, Holmes went through Air Force Officer Training School and later earned a slot in fighter training. His command resume includes a fighter squadron, a specialized undergraduate pilot training group and a fighter wing. He also served as Chief, CHECKMAKE, Directorate of Operational Plans and Joint Matters. He has worked on the United States European Command, Pacific Air Forces and United States Air Force staffs. He most recently served as Director of Strategic Plans, Programs and International Affairs on the Pacific Air Forces Staff.

He has put in more than 3,400 flying hours in all variants of the F-15 Strike Eagle and continues to fly combat missions in Afghanistan.

He is responsible for the air and support operations at two bases and one operating location supporting Operation Enduring Freedom and the International Security Assistance Force. As wing commander, Holmes directs four group commanders and continues to fly on combat missions several times each week with his wing.

Holmes also has a Master of Arts in history from the University of Alabama, a Master of Airpower Arts and Sciences from Air University, Maxwell Air Force Base and a Master of National Defense Studies from the Naval War College. He is also a National Defense Studies Fellow at the Maxwell School of Citizenship and Public Affairs at Syracuse University.



A number of COE alumni will remember Carolyn Wagner, who worked for the UT College of Engineering for 27 years. Mrs. Wagner died Sunday, April 13, 2008. She was a loyal UT sports fan and was especially dedicated to the Lady Vols Basketball Team. Mrs. Wagner and her husband, Jack, also enjoyed attending the college's Alumni Homecoming Barbeque events.

HONORS, EVENTS

& awards

Dongarra Receives IEEE Medal of Excellence



Dr. Jack Dongarra

Dr. Jack Dongarra, University Distinguished Professor in the Department of Electrical Engineering and Computer Science, was selected as the recipient of the first Institute for Electrical and Electronics Engineers (IEEE) Medal of Excellence in Scalable Computing for significant contributions to the scalable computing community through the Technical Committee on Scalable Computing (TCSC) and/or its activities, coupled with an outstanding record of high quality and high impact research. For more information, visit <http://www.ieeetcsc.org/awards/ieee-medal.html>.

COE OED Director Receives Diversity Award

James Pippin, director of the COE's Office of Engineering Diversity, was honored with the Outstanding Minority Engineering Program Director's Award from the Multicultural Engineering Program Advocates. Pippin, who has directed the COE's diversity programs since 1984 received the award at the 29th Annual National Association of Multicultural Engineering Program Advocate's Conference in Atlanta, Ga. on January 25, 2008.



Jim Pippin (right) receives the Outstanding Minority Engineering Program Director's award from Greg Singleton, (left) Director of the Multicultural Engineering Program at the University of Alabama at the conference in Atlanta.

Flandro is Named Fellow of AIAA

Dr. Gary Flandro, professor at the University of Tennessee Space Institute (UTSI), has been named a Fellow of the American Institute of Aeronautics (AIAA) and Astronautics. Flandro was among 30 of the world's finest contributors to the fields of aeronautics or astronautics selected by AIAA and its Board of Directors who will receive the title of Fellow at the Aerospace Spotlight Awards Gala May 13, 2008, at the Ronald Reagan Building and International Trade Center in Washington D.C. He has been a faculty member at UTSI and has occupied the Boling Chair of Excellence in Space Propulsion since 1991.



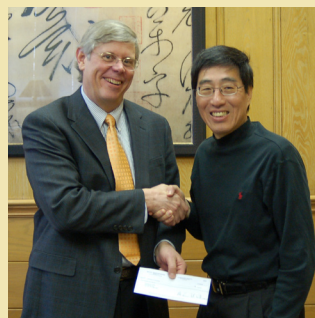
Dr. Don Daniel (right), Director of the UT Space Institute, congratulates Dr. Gary Flandro on his AIAA Fellow honor

Exxon Mobil Corporation Provides Funding to COE

The Exxon Mobil Corporation presented a check for \$18,000 in unrestricted departmental grants to the UT College of Engineering in October 2007. The funding includes support for the Department of Chemical and Biomolecular Engineering as well as the mechanical and civil engineering programs. The unrestricted grant allows the selected academic departments to allocate the money for various educational purposes including scholarships, field trips, visiting speakers, equipment purchases, student and faculty travel to academic-related activities and other educational projects. Career Services Director Russ Coughenour (left) represented the COE during the check presentation with UT engineering alumnus and UT-Knoxville Recruiting Team Captain for Exxon Nathan Keesecker (right).



Bechtel Presents Check to College



Mr. Andrew Phelps (left), principal vice president of Bechtel, Inc., presented a check to Dean Kuo (right) Thursday, February 14, 2008, on behalf of Bechtel, Inc. The \$5,000 gift will contribute to the future of engineering education and research within the college. Mr. Phelps is also a long-time member of the College of Engineering's Board of Advisors.

COE Celebrates with Holiday Party



Dr. Way Kuo and the College of Engineering hosted UT and COE administrators, faculty and staff at the college's annual holiday party on Monday, December 10th, 2007. The event took place at the McClung Museum and featured delicious food and seasonal music in a beautiful setting. Guests included UT System President John Petersen (right) and his wife Carol (left), who joined Kuo (center) in greeting party guests.

Calendar

2008 - UPDATE

Spring Commencement	May 9
Fall Classes Begin.....	Aug. 20
Labor Day Holiday	Sept. 1
Fall Break	Oct. 9-10
Engineers Day	Oct. 16
Homecoming	Nov. 8
Thanksgiving	Nov. 27-28
Classes End	Dec. 2
Fall Commencement	Dec. 13

Contact Information

Senior Administration

Dr. Way Kuo, Dean of Engineering and University Distinguished Professor
Dr. Wayne T. Davis, Associate Dean for Research & Technology
Dr. Alberto Garcia, Associate Dean for Academic Affairs
Dr. Masood Parang, Associate Dean for Student Affairs

Administration & Programs

Communications	974-0533
Dean's Office	974-5321
Development	974-2779
Engineering Academic Affairs	974-6092
Engineering Diversity Programs	974-1956
Engineering Fundamentals	974-9810
Engineering Research	974-8360
Engineering Student Affairs	974-2454
Finance & Admin. Affairs	974-5279
Office of Professional Practice	974-5323

Departments

Chemical & Biomolecular	974-2421
Civil & Environmental.....	974-2503
Electrical & Computer.....	974-3461
Industrial & Information.....	974-3333
Materials Science	974-5336
Mechanical, Aerospace & Biomedical.....	974-5117
Nuclear	974-2525

Research Centers

Materials Processing	974-0816
Maintenance & Reliability	974-9625
Scintillation Materials.....	974-0267
Transportation Research.....	974-5255

President of Chinese Academy of Engineering Visits the COE



Dr. Xu (*right*) is welcomed by Dean Way Kuo (*left*) and COE engineering students.

Dr. C.T. Liu, COE Distinguished Research Professor (*right*) greets Dr. and Mrs. Xu upon their arrival.

Dr. Kuangdi Xu, the president of the Chinese Academy of Engineering and the president of the China-US People's Friendship Association, visited the University of Tennessee October 3, 2007 to present "The Major Achievements of the Chinese Steel Industry" as part of the College of Engineering's Distinguished Lecture Series.

Recognized as an eminent metallurgist in China, Xu has also been elected as the Foreign Member of the Royal Academy of Engineering, United Kingdom, and the Foreign Member of the Royal Swedish Academy of Engineering Sciences (IVA). He is also an Honorary Fellow of the Institution of Civil Engineers (ICE), United Kingdom.

In his lecture, Xu reviewed the major achievements of the Chinese iron and steel industry, including the development of new materials, environmentally friendly manufacturing and the extraction of useful hydrogen from the waste gas of metallurgical furnaces.

Xu's wife, Mrs. Luoping Xu, who is a professor at Shanghai University, accompanied him on the visit as well as entouragees from the Chinese Academy of Engineering and the Chinese Academy of Science.

The University of Tennessee is an EE/AA/Title VI/Title IX/Section 504/ADA/ADEA institution in the provision of its education and employment programs and services.

All qualified applicants will receive equal consideration for employment without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability or covered veteran status.



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