

From the Dean's Desk



Dr Wayne Davis

There has never been a more exciting and challenging time to be in the field of engineering. Nothing exemplifies this more than the 14 Grand Challenges for Engineering issued by the National Academy of Engineering (NAE) in 2008 and listed below:

- Make solar energy economical
- Provide energy from fusion
- Develop carbon sequestration methods
- Manage the nitrogen cycle
- Provide access to clean water
- Restore and improve urban infrastructure
- Advance health informatics
- Engineer better medicines
- Reverse-engineer the brain
- Prevent nuclear terror
- Secure cyberspace
- Enhance virtual reality
- Advance personalized learning
- Engineer the tools of scientific discovery

Detailed descriptions of each of these challenges are posted on the NAE website

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UT College of Engineering Breaks Ground on the John Tickle Engineering Building



On Tuesday, December 1, 2009, the University of Tennessee, Knoxville College of Engineering (COE) broke ground on the John Tickle Engineering Building, a technologically advanced facility that will house two key departments in the COE.

The five-story, 110,000-square-foot building, named for John Tickle, president and owner of Strongwell Corp. and a 1965 industrial engineering alumnus of the college, will anchor a new gateway to the campus and will provide an improved link between Neyland Drive and the Hill.

The \$23.1 million new facility is made possible through major private support from John and Ann Tickle and public funding from the State of Tennessee. Additional gifts from Chad (BS/IE '70) and Ann Holliday (BS/CCI '70), Jim Gibson (BS/IE '71) and Eric Zeanah (BS/IE '84) as well as from the chancellor's office have created a true public/private partnership to ensure educational excellence.

The classrooms, labs, conference rooms and spaces throughout the building also provide opportunities to recognize individual or corporate donors or for donors to honor special faculty, family or friends. Gifts will be used to build an enrichment

endowment in each department that will ensure a strong foundation for the future.

Facilities for each of the two departments are currently spread across several different buildings both on and off the main campus. The new space will include the American Society of Civil Engineers Project Lab/Student Project Lab, the GeoTech Lab and the Undergraduate Soils Laboratory, computer and senior design labs, a student study and seminar room and faculty and graduate student offices.

A unique feature of the building is the pedestrian bridge that will connect the John Tickle Engineering Building to the heart of the campus. Easing pedestrian access for students, faculty and staff to the Hill, the bridge is a signature element that also will provide a visual link from the facility to the existing engineering buildings on the Hill.

Over 200 COE and UT administrators, faculty, staff and students as well as political and community dignitaries gathered under a large tent set up on the building site for the event. The overcast day was chilly but spirits were high as the event speakers praised the beginning of a new era for the college.

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The John Tickle Engineering Building Groundbreaking Team: (left to right) Mike Crabtree, representative, Campaign for Tennessee College of Engineering Executive Committee; Wayne Davis, UT Knoxville engineering dean; Jan Simek, UT interim president; Jim Porter, chair of the UT College of Engineering Board of Advisors; UT Knoxville chancellor Dr. Jimmy G. Cheek; Ann Tickle; John Tickle; Dayakar Penumadu, professor and head, Department of Civil and Environmental Engineering; Knoxville Mayor Bill Haslam; Knox County Mayor Mike Ragsdale; Bruce Robinson, professor and interim head, Department of Industrial and Information Engineering; and Zach Wamp, congressman from Tennessee's 3rd congressional district.

COLLEGE *information*

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at <http://www.engineeringchallenges.org/cms/challenges.aspx>

Approaching these formidable challenges will require that engineers work closely with other professions in a variety of areas including public policy, business, law, ethics and social and human behavior. The students, faculty and staff of our college are already engaged in multidisciplinary efforts to address a number of the NAE challenges, but it will take the concerted effort of all members of the engineering profession to address this broad range of conundrums.

One outcome of the Grand Challenges to Engineering was the development of the NAE Grand Challenges Scholars Program in 2009. Our college plans to participate in this program. A combined curriculum and extra curricula program with five components (1) Research experience; 2) Engineering+, an interdisciplinary curriculum which prepares students to work at the overlap of public policy, business, law, ethics, human behavior, etc; 3) Entrepreneurship;

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Newsletter Production

Published by
Office of Engineering Communications
College of Engineering
The University of Tennessee
207 Perkins Hall
Knoxville, TN 37996-2012

Editor/Writer
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Graphic Design
Mitchell Williamson

Contributing Photographer
Nick Myers, UT Creative Services

PAN: E01-1301-012-038-10 DOP: 3/10

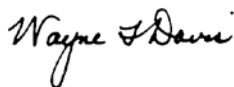
4) Global dimension; and 5) Service Learning), the scholars program is designed to prepare the next generation of engineers to help meet the Grand Challenges to Engineering.

The College of Engineering has already integrated the five components of the Grand Challenges Scholars Program into the college's new Honors Engineering Leadership Minor. This minor is a unique partnership between the College of Engineering, the College of Business, the Chancellor's Honors Program and the College of Education that provides a single curricular program that, along with the students' honors requirements, meets all the Grand Challenges Scholar requirements. This select group of students will have a leadership experience unlike any other we have been able to offer in the past, and this minor will form the basis for UT's Grand Challenges Scholar proposal.

Examples of how our college's students and faculty are engaging in the above components include involvement of our students in numerous research projects within the college and active involvement in international experiences (i.e. all honors and many other students in engineering will have had an international experience before graduating and there are now international co-op experiences). Additionally, the College of Engineering recently developed an undergraduate minor in sustainability and, in partnership with the College of Business, an undergraduate minor in leadership. We also have a new minor in engineering entrepreneurship. Thanks to Dr. Lee Martin (ME '78 and member of the College's Board of Advisors), 28 undergraduate and 14 graduate students are involved in the senior/graduate level entrepreneurship class, including 11 teams that are responding to the latest Department of Defense Small Business Technology Transfer (STTR) solicitation. To complete the picture, a new non-profit company, TNovation (see www.TNovation.com) has been established to move innovative ideas from the university level to the next stage of development. These exciting new programs will be featured in upcoming issues of the *Tennessee Engineer*.

As alumni and friends of the college, please contact us at coe@utk.edu if you would like to provide assistance in any of the above areas as our college strives to address the NAE Grand Challenges to Engineering and to prepare our students to meet these challenges.

Sincerely,



Wayne T. Davis
Dean of Engineering



COE Dean Wayne Davis (center) looks at the John Tickle Building site with Betsy Creekmore, Senior Associate Vice Chancellor for Finance and Administration (left) and John Tickle (right).



Chancellor Jimmy Cheek (left) talks with COE Senior Development Director Dorothy Bryson (right) at a luncheon preceding the groundbreaking ceremony.



Chancellor Cheek serves as master of ceremonies for the groundbreaking ceremony.



UT Interim President Jan Simek praised the Tickle's commitment to engineering education.



John Tickle addresses the crowd at the groundbreaking ceremony.

JOHN TICKLE BUILDING *groundbreaking*

College of Engineering Breaks Ground continued from page 1



UT Knoxville Chancellor Dr. Jimmy G. Cheek (right) presents a gift to Ann Tickle (left) and John Tickle (center) in recognition of their generosity to the University.

UT Knoxville Chancellor Jimmy G. Cheek served as master of ceremonies for the occasion.

"This facility will play a vital role in our efforts to bring students into the engineering fields, and will greatly enhance the opportunities available to faculty and students as they work to shape the future of our state and our nation," Cheek said. "We are all especially grateful to both John and Ann Tickle for their support for our university and its mission, and we're proud that the building will bear John's name."

Additional speakers included UT Interim President Jan Simek and COE Dean Wayne Davis, who praised the Tickle's commitment to engineering education.

Knoxville Mayor Bill Haslam and Knox County Mayor Mike Ragsdale presented proclamations to the Tickle's proclaiming December 1, 2009, as John and Ann Tickle Day in both the city of Knoxville and Knox County.

In his remarks, Tickle commented that he views the building as another step to achieving progress for the college and the university.

"Education is the key for taking this state and our nation forward. In academics, like athletics, to get the best we have to have the best facilities," Tickle said.

Congressman Zack Wamp, another guest speaker, stressed the importance of the engineering program at the university and its close ties to nearby Oak Ridge National Laboratory (ORNL).

"This is a vital and growing relationship between the lab and the university," Wamp stated. "We need to be sure that it continues to thrive."

At the conclusion of the program, the groundbreaking team was presented with hard hats and orange bow-bedecked shovels for the ceremonial groundbreaking. Outstanding students from each department handed out the hard hats and shovels. Jessica Davis, Community Service Chair of the American Society of Civil Engineers UT Student Chapter, represented the Department of Civil and Environmental Engineering and Samantha Lee, president of the UT student chapter of the Institute for Industrial Engineers, represented the Department of Industrial and Information Engineering.

Along with Cheek and the Tickle's, groundbreaking team members included Jan Simek, UT interim president; Knoxville Mayor Bill Haslam; Knox County Mayor Mike Ragsdale; Jim Porter, chair of the UT College of Engineering Board of Advisors; Mike Crabtree, representative, Campaign for Tennessee College of Engineering Executive Committee; Wayne Davis, UT Knoxville engineering dean; Dayakar Penumadu, professor and head, Department of Civil and Environmental Engineering; Bruce Robinson, professor and interim head, Department of Industrial and Information Engineering; and Zach Wamp, congressman from East Tennessee's 3rd district.

After the ceremony ended, guests adjourned to a nearby reception tent for refreshments, which included hot tea, cider, flavored coffee drinks, shortbread, gingerbread and cookies.

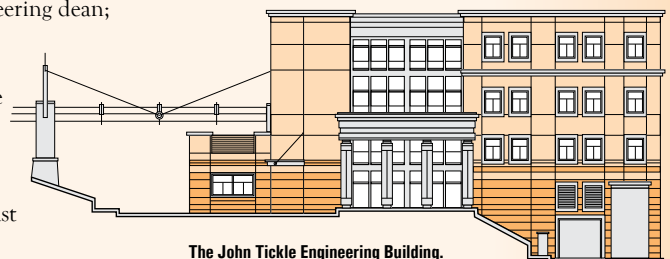
The event was not the first time that the Tickle's have been honored at a groundbreaking ceremony. They also provided considerable support for the John and Ann Tickle Small Animal Hospital expansion within UT's College of Veterinary Medicine. Their gift allowed construction to go forward on the \$10 million, 32,000-square-foot addition in 2007. The facility was opened in the spring of 2008.

Tickle received his bachelor's degree in industrial engineering in 1965 from UT Knoxville. He served in positions with Owens Corning Tech Center, Justin Enterprises and Krueger Metal Products before returning to his hometown of Bristol, Tenn., to assume the presidency of Morrison Molded Fiber Glass Co. (MMFG). Tickle stayed with MMFG after its acquisition by Shell in 1985 and eventually purchased the company. He renamed the company Strongwell Corp. in 1997. Today, Strongwell is a worldwide operation, with the Bristol division serving as its headquarters.

Tickle is a member of the Campaign for Tennessee Engineering Executive Committee. He has been the recipient of a host of local, regional and national business and philanthropic awards, including having The Mall at Bristol Regional Medical Center, which was dedicated in 2004, named for him; laureate in the Junior Achievements Business Hall of Fame in 2000; Virginia Chamber of Commerce Torchbearer Award for Western Virginia in 1999; and serving as Bristol Regional Hospital chairman from 1987 to 1992. He also was a member of the UT Athletics Board and has served on the College of Engineering's Board of Advisors.

Ann Tickle graduated with a bachelor's degree from the UT Knoxville College of Education, Health and Human Sciences in 1965. She is the former "Miss Ann" who hosted the Romper Room television program. Mrs. Tickle has also been extensively involved in philanthropic work.

For more information about gift recognition opportunities in the John Tickle Building, contact the COE development office at (865) 974-2779



The John Tickle Engineering Building.

COE Names Sixth UT-ORNL Governor's Chair

Dr. Frank Loeffler, a leading expert in environmental microbiology, has been named the sixth University of Tennessee-Oak Ridge National Laboratory Governor's Chair and is the fourth Governor's Chair hire for the College of Engineering.



Dr. Frank Loeffler

Beginning May 1, 2010, Loeffler will serve as the Governor's Chair for microbiology and civil and environmental engineering in the Department of Microbiology and the Department of Civil and Environmental engineering at UT Knoxville and in ORNL's Biological and Environmental Sciences Directorate.

He currently is the Carlton Wilder associate professor of environmental engineering at the Georgia Institute of Technology, where he has served since 1999. Prior to joining Georgia Tech,

Loeffler was a Feodor-Lynen fellow and research associate at Michigan State University. He received his bachelor's in biology and agricultural sciences and master's degree in microbiology at the University of Hohenheim in Germany. He received his doctorate in microbiology and technical biochemistry from the University of Hohenheim/Technical University Harburg.

Loeffler's research centers on discovering new ways to clean the environment, counter damage done to ecosystems by human activity and improve environmental health. At the heart of his research are microbes, and he has examined ways how naturally occurring bacteria can either break down or reduce the risk from pollutants including chlorinated solvents, radioactive waste and greenhouse gases. In addition, Loeffler and his research team characterize new kinds of bacteria in an effort to develop innovative technologies from environmental protection to medical applications.

Funded by the state of Tennessee and ORNL, the Governor's Chair program attracts top scientists

to broaden and enhance the unique research partnership that exists between the state's flagship university and the nation's largest multi-program laboratory. It is designed to attract exceptionally accomplished researchers from around the world to boost joint research efforts that position the partnership as a leader in the fields of biological science, computational science, advanced materials and neutron science.

Additional COE UT-ORNL Governor's Chairs include:

Howard Hall, an expert in nuclear security who came to UT Knoxville and ORNL from Lawrence Livermore National Lab. He was appointed in March 2009.

Yilu Liu, an electric grid researcher who came to UT Knoxville and ORNL from Virginia Tech, who was appointed in June 2009.

Thomas Zawodzinski, an energy storage researcher who came to UT Knoxville and ORNL from Case Western Reserve University. He was appointed in August 2009.

Dr. Robert "Buddy" Moore Appointed Executive Director of U.T. Space Institute



Dr. Robert "Buddy" Moore

Dr. Robert "Buddy" Moore, associate dean for research and graduate programs for the College of Veterinary Medicine, is the new executive director of the University of Tennessee Space Institute. UT Chancellor Dr. Jimmy G. Cheek announced Moore's

appointment to the position on December 7, 2009.

"Dr. Moore is a very well respected and proven administrator who will lead the institute's research and instructional mission with an eye for building new partnerships and graduate enrollment. He is a proven leader who can help implement strategies to enhance interdisciplinary projects and take advantage of opportunities," said Cheek. "His

experience with the university and several key research centers provides a broad framework for enhanced collaboration with UT, as well as other universities and public and private partners."

Moore joined the UT Knoxville faculty in 1981 as an assistant professor of microbiology. He later served as head of the department of microbiology, helping to grow individual and collaborative research programs. In 2001, he was named associate dean for research and graduate studies for the College of Veterinary Medicine. Along with overseeing the college's research and graduate programs, he directed the Center of Excellence in Livestock Diseases & Human Health. He also directed the Comparative and Experimental Medicine (CEM) Graduate Program, a joint program of the college and the UT Health Science Center's Graduate School of Medicine. The CEM program has seen a dramatic increase in faculty participation, student enrollment and assistantships as well as support for shared projects about human and animal health.

Moore has a bachelor's and a master's from Clemson University and a doctorate from the University of Texas at Austin. Prior to joining the UT faculty, he served as a staff fellow at the National Institutes of Health. During his career, he has published considerable research and has been an associate editor of the *Journal of Immunology* and editor of *Infection and Immunity*.

The UT Space Institute, located in Middle Tennessee, is a graduate education and research institution that was founded in 1964 to focus on research in engineering, physics, mathematics and aviation systems. Nearly 1,500 graduate degrees—including more than 180 doctorates—have been awarded through the institute in a partnership with the College of Engineering.

UTSI faculty, staff and students welcomed Moore and his wife, Mrs. Judy Moore, to campus at a reception held in the UTSI lobby. Judy Moore is the Director of Finance and Administration for the COE.

NE Department Head Goes "Around the World" to Lecture on Nuclear Engineering



Dr. Dodds lecturing to HEU faculty and students on excursion modeling and applications in nuclear criticality safety.

Dr. Lee Dodds, IBM Professor of Engineering and Head of the UT Nuclear Engineering (NE) Department, completed a lecture tour in October 2009 that literally took him "around the world." Dodds and fellow NE associate professor Dr. Ivan Maldonado, along

with other colleagues from ORNL, Texas A&M and the University of Maryland, traveled to Obninsk, Russia, to attend MPCA'2009, the 4th Russian International Conference on Nuclear Materials Protection, Control and Accountability, where all members of the group gave tutorials or lectures in a technical session organized by Maldonado.

The U.S. delegation next visited the Moscow Engineering Physics Institute in Moscow, Russia, where more presentations were given in conjunction with discussions on U.S./Russia collaboration in nuclear engineering education and research. At the end of a very productive week in Russia, everyone in the group returned home to the U.S. except for Dodds, who boarded an overnight

flight on Russian airline Aeroflot from Moscow to Beijing, China.

Dodds spent a week at Harbin Engineering University (HEU) lecturing to HEU faculty and students on a variety of topics related to nuclear engineering education and research. HEU has a relatively new nuclear engineering program with over 1000 students. At the end of the week in China, Dodds returned home via an overnight stay in Seoul, South Korea. The U.S. Department of Education Fund for the Improvement of Post Secondary Education (FIPSE) financially supported the Russian segment of the trip and HEU provided funds for the Chinese portion.

CEE Professor Named President of UT Research Foundation

Dr. Randy Gentry has been named the new president and CEO of the University of Tennessee Research Foundation (UTRF), the not-for-profit organization responsible for commercializing technology that emerges from the university.



Dr. Randy Gentry

Gentry joined the COE in 2002. He was a previously a faculty member from the University of Memphis, where he earned his bachelor's, master's and doctorate degrees in civil engineering. He is an associate professor in civil and environmental engineering at UT Knoxville. Since 2007, he has served as director of the Institute for a Secure and Sustainable Environment, where he has been working with researchers to develop a strong sustainability science program. He also has been assisting UT Executive Vice President David Millhorn with developing public-private partnerships for strategic initiatives at the university. Gentry will retain both of these roles as he takes on the presidency of UTRF.

Gentry succeeds former COE associate and interim dean Dr. Fred Tompkins, who stepped down as president and CEO after having served in that role for more than six years. Tompkins has returned to his faculty position as distinguished professor of biosystems engineering in the Department of Biosystems Engineering and Soil Science. He is also coordinating on individual UT system projects with the Office of the Executive Vice President/Vice President for Research.

Two COE Professors receive NSF Career Awards



Dr. Charles Qing Cao

Dr. Charles Qing Cao, assistant professor in the Department of Electrical Engineering and Computer Science, and Dr. Haitao Liao, joint assistant professor in the Department of Industrial and Information Engineering and the Department of Nuclear engineering, have both received a National Science Foundation (NSF) CAREER Award. The CAREER award is a very prestigious, competitive national recognition that acknowledges and supports outstanding young faculty members.



Dr. Haitao Liao

Dr. Jason Hayward, Department of Nuclear Engineering



Dr. Jason Hayward (left) works with nuclear engineering graduate student Clint Hobbs (right) in Hayward's lab, located in the Science and Engineering Research Facility.

Dr. Jason Hayward, an assistant professor in the Department of Nuclear Engineering (NE), is excited about the renewal of interest in nuclear power.

"Nuclear power has been internationally recognized as an essential part of the solution in meeting the increased global energy need," Hayward said. "Although there are still engineering challenges—for example, long term disposal of nuclear waste—it is becoming clear to the world community that nuclear power's benefits greatly outweigh its risks."

Hayward became interested in nuclear engineering after studying for his undergraduate degree in physics and a stint as an officer in the Navy. He served as an engineering instructor during part of his eight years in the military, and enjoyed the interaction with students.

While studying for his Ph.D. at the University of Michigan, Hayward continued to teach both laboratory and classroom sessions. He also had a role model in his faculty advisor, who demonstrated that being successful in academia is a combination of excellent teaching and cutting-edge research. Hayward decided that he would become an engineering professor.

Hayward joined the NE faculty at the University of Tennessee in January 2008. The university's relationship with Oak Ridge National Laboratory (ORNL) was a big attraction.

"The joint faculty opportunity was one of the primary reasons I was attracted to the nuclear engineering department at the University of

Tennessee. I thought it was an outstanding opportunity to do research both at the university and ORNL, and this has turned out to be the case. It has been the best of both worlds," Hayward commented.

Hayward's research interests include basic and applied research in the area of radiation detection and measurement. Applications of main interest include nuclear security and safeguards as well as nuclear instrumentation for advanced reactors. The young professor's current research is focused in development of new materials and systems to address difficult problems in detection, characterization and imaging of nuclear materials.

Hayward hopes to prepare his students through both education and research for leading positions in the nuclear workforce. He would like to see the nuclear engineering department become one of the top five departments in the nation and hopes to help position UT as a dominant leader in the area of nuclear security science.

"The long term disposal of nuclear waste is a challenge that needs to be solved in order for nuclear power to gain overwhelming support in the nation and the world. As nuclear power expands globally, a second significant issue is the safeguarding of nuclear technology at home and abroad; we need more nuclear power with less proliferation," Hayward said.

Outside of the classroom, Hayward enjoys spending time with his family—wife Shannon and daughters Hannah, 10, and Eliana, five. He also has recently resumed long distance running.

STUDENT feature

Donors, Faculty, Staff and Students Enjoy COE Fall 2009 Student Scholarship Luncheon

The College of Engineering held its Student Scholarship Luncheon on Thursday, October 8, 2009, at the UT Conference Center. Richard Sneed, an industrial engineering alumnus, former Chief Executive Officer of Carlson Restaurants Worldwide and member of the COE Board of Advisors, was the special guest speaker.

Over 130 COE faculty, staff, students, donors and guests enjoyed the luncheon, which offered an opportunity for many donors to meet and talk personally with scholarship recipients.

Dr. Masood Parang, Associate Dean for Academic and Student Affairs, was master of ceremonies for the event. COE Dean Wayne Davis also made remarks to the group.

The Student Scholarship Luncheon, first held last year, was established as an annual opportunity to recognize outstanding students and thank donors who provide financial support. The luncheon, which takes place in the fall, and the Faculty and Staff Awards Dinner, which is held in the spring, are new events that replaced the college's Honors Banquet in 2009.



Associate Dean for Academic and Student Affairs Masood Parang served as master of ceremonies for the luncheon.



COE Dean Wayne Davis (left) presents an appreciation gift to Richard Sneed, a UT industrial engineering alumnus, COE Board of Advisors member and former CEO of Carlson Restaurants Worldwide, who served as the luncheon keynote speaker.



Dr. Lee Martin, COE Board of Advisors member and donor of the Charles Weaver Engineering and Band Scholarship, with Ben Farr, drum major of the UT Pride of the Southland Band and recipient of the Weaver Scholarship.



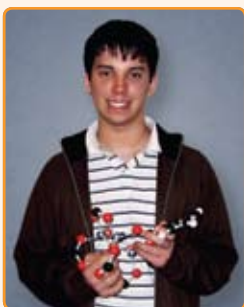
The COE Student Scholarship Luncheon was attended by over 130 students, faculty, staff, donors and guests.

J.P. Luna: Setting High Standards

Jonathan Patrick Luna (just call him JP) may only be 18 years old, but he already is comfortable working side by side with graduate students in Dr. David Keffer's lab.

Luna became interested in engineering after attending the American Society of Materials (ASM) Materials Camp. He became acquainted with Dr. Claudia Rawn, an assistant UT-ORNL professor in the Department of Materials and Engineering, who has overseen camp activities for several years. Rawn noted Luna's potential and matched him with Keffer as his mentor. Keffer, a professor in the Department of Chemical and Biomolecular Engineering, put Luna to work in his lab in the Science and Engineering Research Facility (SERF), utilizing experimental data to construct models of nanostructured metal-organic frameworks.

"When I accomplish my tasks and I am able to see progress, I think 'hey, I'm being useful to these



J. P. Luna

intelligent, highly competent people.' I appreciate the chance to work in this challenging setting," Luna said. "Dr. Keffer has been an excellent mentor and leader to me, holding me to a high standard which I have worked hard to meet."

"Over the last year and a half, JP has played an important role in our research team. He has built computer models of nanoporous adsorbents that are used by the graduate students in molecular simulations," Keffer said. "Ms. Nethika Suraweera is using JP's models to study hydrogen storage in these materials. Mr. Ruichang Xiong uses JP's models to investigate the use of these materials as explosive sensors to combat terrorism. His involvement is mutually beneficial—JP has had the opportunity to learn new skills and experience life in a research environment and at the same time he has made useful contributions to our work."

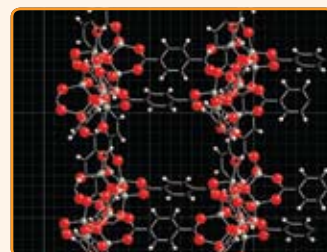
Luna, who grew up in nearby Maryville, Tenn., is the son of Charles Patrick Luna, a high school special education teacher and coach. Luna's mother, Terri Lyon, has a Ph.D. in industrial psychology and has home-schooled the young student since the sixth grade. Luna also has a younger brother, Daniel, who is 14 years old and a freshman at Maryville High School.

Luna is still in the planning stages for his college career, but he's considering majoring in computer science. He also wants to continue his research work.

"I am primarily interested in computational science, which is a blend of science, engineering, math and computer science. Engineering and computer science are both very analytical fields and that appeals to me," Luna added.

Luna appreciates the experience that he is gaining with Keffer, and looks forward to continuing his work in the lab.

"The tasks in the lab continually challenge me and provide me with very valuable experience. Being a high school student helping graduate students has given me confidence and perspective, in part because of the respect that has been shown to me by Dr. Keffer and the students," Luna said.



One of J. P. Luna's computer models

Engage has a Direct and Positive Impact

Increasing both retention and graduation rates are publicly stated priorities for Tennessee's Governor Phil Bredesen as well as UT Knoxville Chancellor Jimmy Cheek. In the College of Engineering, the Jerry E. Stoneking Freshman Engineering Fundamentals Program, has been shown to improve both. Engage, one of the country's most innovative freshman engineering initiatives, is still going strong 13 years after its inception.

Initiated by the college's Board of Advisors and other industry leaders and beginning with a pilot group of 60 freshmen in the fall of 1997, the program has grown to a total enrollment of 348 freshmen in the fall of 2009.

"We show that 78% are passing EF 151 and 82% are passing EF 152, and that number has gone up quite a bit," notes Dr. Richard Bennett, a professor in the Department of Civil and Environmental Engineering and longtime Engage faculty member who became the director in 2008. "The retention rate of freshmen taking EF 151 is 82%. The retention rate of freshmen taking EF 157—the honors course—is even better, at 89.5%."

While part of the changing demographics can certainly be attributed to the high caliber of students accepted into the program, additional data shows that this program has a direct and positive impact.

The Engage program incorporates project-oriented, hands-on activities. Freshman engineering topics—such as physics, statics and dynamics—are integrated into courses during the students' first two semesters. The program also emphasizes teamwork and communication skills. Additionally, teams of professors working with graduate student assistants conduct all of the instruction in the Engage curriculum.

The Engage program is currently housed in Estabrook Hall, where faculty offices, study areas and classrooms have been located to establish a "Freshman Village." Students have the opportunity to live on a floor dedicated to Engage students, providing a living-learning community.

"We've made a few changes, but the basic program is still the same," Bennett said. "We added Dr. Ortal Arel to our faculty over a year ago—she has a Ph.D. in electrical engineering. Dr. Arel brings some diversity to our group, since my area of expertise is civil engineering and one of our other instructors, Will Schleiter, has a mechanical engineering degree."

The program has also adapted to the modern age of personal communication devices with a new response system. A clicker or other web-enabled device such as a laptop or an iPod allows students to respond to questions in lectures online and receive immediate feedback. Students can also look at archived editions of class sessions to see whether their answers were right or wrong.



Engage Director Dr. Richard Bennett (center) works with students on a project.



Engage students participate in a group exercise

Engage expanded its curriculum last semester with a module on electricity and magnetism, which includes instructions on basic circuits and testing.

At the end of their freshman year, the Engage students declare a major and move on to their respective departments.

Private support for Engage provides funding to strengthen the program and is a college campaign priority. Three major campaign commitments from engineering alumni are helping with this initiative. In addition to campaign commitments to the Tickle Engineering Building and to support research through the Sustainable Energy and Education Research Center, Jim Gibson (BS/IE '71) has pledged to the Engage fund and Jim McKinley (BS/ChE '77) and his wife Sandra have made a \$150,000 commitment to the Engage endowment. Campaign Executive Committee member Bill Moore (BS/EE '59, MS/EE '60) and his wife, Sylvia, have also created a trust that gives \$30,000 per year to Engage. Gift recognition

opportunities include endowing the director's position, endowing faculty positions dedicated to Engage and creating Engage graduate fellowships.

Bennett is encouraged by the program's success and the support that it has received from faculty and students.

"We are also excited about the move to Ferris Hall, which will take place after the completion of the Min H. Kao Electrical Engineering and Computer Science Building," Bennett commented. "Our program will be located on part of the fourth floor and all of the fifth floor of Ferris once the electrical engineering and computer science faculty and staff move to the new facility. The area will be renovated specifically for Engage and we should have much improved and updated space for classrooms, offices and laboratories."

For more information on the Jerry E. Stoneking Engage Freshman Engineering Program, visit <http://ef.engr.utk.edu/ef-2008/>.

IIE Professor Works with UT to Promote Efficient Operations



Dr. Rupy Sawhney worked with the UT Police Department to help streamline and update their operations. From left to right: Captain Jeff Seavers and Sergeant Mike Richardson, UTPD; Dr. Rupy Sawhney; and graduate students Tachapon "Max" Saengsureeporn-chai and Prasanna V. Rao. Not pictured: Chris Wright.

When the University of Tennessee, Knoxville administrators needed help in streamlining operations, they did not have to look very far—help was available right on campus in the form of Dr. Rupy Sawhney, a professor in the COE's Department of Industrial and Information Engineering (IIE).

As the economy began faltering over two years ago and state support became more diminished, the university administrators began looking for ways to prepare UT for future budget cuts and other financial shortages by finding methods to improve efficiency and cut costs.

"I received a telephone call from then Vice Chancellor for Finance, Denise Barlow, indicating that she had received a very complimentary letter from a senior executive at ORNL expressing appreciation for work that Dr. Sawhney had done to help streamline certain operations at ORNL, resulting in a substantial cost savings," said COE Dean Wayne Davis. "Denise's question was, 'can IIE do that for the university?' I answered that it was highly likely that they could identify recommendations for cost savings given their very successful track record with corporations and the national lab, but savings only occurred if the recommendations were implemented. Within a week they had contacted Dr. Sawhney and his students and engaged IIE in its first task."

Sawhney, whose expertise includes modeling and analysis of production systems with a focus on reliability and lean operations, began working with Chris Cimino, who replaced Barlow in the vice chancellor's position when she retired, to help with a review plan.

Sawhney decided to set up a team methodology that would not only benefit the university but would also provide opportunities for both undergraduate and graduate students to benefit from taking part in the process.

"We took on four projects last year, using teams consisting of three industrial and information engineering graduate students and four undergraduate students," Sawhney said. "I serve as the team leader, and the graduate students use the system review as part of their lab experience."

Sawhney begins by instructing the undergraduate students in the methodology of lean systems, utilizing both six sigma quality measures and industry continual improvement as guidelines. Although many of these methods are designed for manufacturing environments, most transfer easily to other settings.

The teams improved operations in several university offices, including the UT Police Department. Sawhney estimates that their efforts have saved UT over \$500,000 a year.

Sawhney also established a UT Lean Systems Office on the fourth floor of Andy Holt Tower.

"This office is always open, and it provides a more formal area to address the issues of efficiency, quality and economy," Sawhney said. "In his recent State of the Union address, President Obama stated that he wants higher education to be more affordable and urged universities to cut administrative costs. We are on the forefront of leading this effort, and since our teams have the full support of the chancellor's office, Chris Cimino, our dean Wayne Davis, and my department head Bruce Robinson, we will continue to be successful."

"Dr. Sawhney and his team are nationally recognized experts in their field and we're fortunate to have them in our own backyard," said Cimino. "We are pleased they are helping us identify efficiencies that equate to real cost savings for the campus."

Sawhney's student teams are working with five new projects this year, including a project dealing with housing for students and visitors.

"First of all, we listen to the people within these departments who will be affected," Sawhney said. "We try to make the review a pleasant experience and we want to work together with everyone to make sure that everything goes as planned. This is a win-win situation for the both the departments and the students, who are gaining valuable experience."

"The Department of Industrial and Information Engineering is very pleased that Dr. Sawhney is working with UT on some of its operations," said Dr. Bruce Robinson, IIE department head. "He has helped many companies and businesses to improve their processes and become more efficient not only in Tennessee but around the world. His work has had great economic impact. An important characteristic of Dr. Sawhney's work is that it is also converted into scholarly publications and the education of graduate students."

Sawhney is excited about the possibilities for the program, and looks forward to working with other departments in the future.

"We are working in a way that is different from consultants. We not only design processes, we implement them and continuously work with the employees to get issues resolved and to make sure that everyone is comfortable with new ways of operating. At the same time, we are teaching students," Sawhney said. "Everything that we can do to help the university to be more efficient and to save money on operations is helpful. Our goal is to save the university between \$500,000 to \$1 million each year."

An Alternative Path of Service – Dr. Eddie Hamilton



Dr Eddie Hamilton

Dr. Eddie Hamilton's childhood dream of becoming a doctor came true—he just made a slight detour through engineering on the way.

Hamilton, who was born in Paducah, Kentucky, grew up in that small city during a time of momentous changes. In 1964, the first year of forced school desegregation in Paducah, ten years after the landmark *Brown vs The Board of Education* decision, Hamilton began attending the newly integrated Andrew Jackson Elementary School when he entered the 2nd grade. The school's principal, Mrs. McNabb, took an interest in Hamilton and supported him through his first year at the elementary school. His family then moved into the McCracken County school district, outside of Paducah, where he attended Lone Oak Elementary School. Due to his outstanding academic performance at Andrew Jackson (now renamed McNabb Elementary School) he was promoted to the 4th grade and was able to skip the 3rd grade entirely. He completed his primary education at Lone Oak Middle School and graduated from Lone Oak High School in 1976.

Although Hamilton had always wanted to be a physician, several engineers at the nuclear energy plant in Paducah, formerly Union Carbide, where his mother worked, learned of the young student's academic prowess and urged his family to consider a career in engineering. Because of the strong basic science background that is associated with engineering, it was generally felt that he would be well prepared for medical school with an engineering degree, and he would also be better equipped for the job market if he changed his mind about a career in medicine. Hamilton initially chose biomedical engineering as his major, but because it was a relatively new field at the time, he was not able to find suitable co-op program in the field. He chose instead to switch to chemical engineering and obtained a co-op position at Oak Ridge National Laboratory, a sister facility of the plant in Paducah.

Hamilton enjoyed his years at the University of Tennessee, Knoxville.

"My favorite memories at UT were staying in Hess Hall (also known as 'The Zoo') for two years during a time when it certainly still lived up to its reputation. I met number of colorful

characters, had a great time myself and made some lifelong friends there," Hamilton said. "I certainly enjoyed my transformation to the Big Orange football program— I had the pleasure of watching Jimmy Streater, Willie Gault, Anthony Hancock, Reggie White and a host of others. It was a real thrill when Johnny Majors came back home and I enjoyed experiencing those 'Alabama' weekends!"

After receiving his bachelor of science degree in chemical engineering from UT in 1981, Hamilton chose to get his M.D. from the Vanderbilt University School of Medicine, and he served his residency in pediatrics at Vanderbilt University Medical School.

"I always felt a greater affinity for children as I progressed through medical school. Treating patients with childhood cancer and preventable infectious diseases was much more rewarding for me than the often 'self-inflicted' conditions that I managed at the adult hospitals," Hamilton recalled. "Many of my adult patients had conditions that were attributable to chronic alcohol use, cigarette smoking, drug addiction, etc. While I certainly had empathy for those adults and learned a great deal by caring for them, my heart told me that I could be more useful treating patients who were more innocent victims of their human condition rather than active participants."

In 1990, Hamilton started his practice, Centennial Pediatrics, in association with the Centennial Medical Center. He later expanded the pediatric group to offices in Bellevue, Brentwood, Clarksville, Lebanon, Mt. Juliet, Murfreesboro, Skyline, Smyrna, Southern Hills and Spring Hill. Today, Centennial Pediatrics is the largest privately owned pediatrics practice in Tennessee.

"The most rewarding aspect of my medical career has been, I believe, that I have made a real difference. Early in my career I had a chance to connect with families and children by direct care from me in life and death situations. Later, as I expanded my practice, I was able to provide higher quality care to an entire community by building a network of practices throughout middle Tennessee with the help of dozens of highly trained physicians and nurse practitioners," Hamilton commented. "We later branched into pediatric subspecialties. Today, we continue our mission of providing exceptional care to all children regardless of race or socioeconomic status. Finally, I am now at a point in my career where I can serve as an advocate for children and pediatric health care professionals at a policy level. My work with the American Academy of Pediatrics and state government has afforded me a seat at the table

when decisions that affect my profession and my patients are made."

Hamilton is concerned that the present political polarization about the nation's health care crisis is distracting the public from the real need for reform.

"I am currently the president of our state medical society, Tennessee Chapter of the American Academy of Pediatrics (TNAAP), and we will likely spend my entire tenure addressing this very issue. The current health care system is not sustainable and we are in desperate need of health care reform," Hamilton said. "Regrettably, the current political climate is completely out of touch with reality. The healthcare delivery system itself could be vastly improved if all the stakeholders were included in the discussion. I don't think that this country will ever accept a single payer model but we certainly must have universal coverage in order to improve quality, ensure adequate provider capacity and enhance patient education and outreach. I think we can do this in a competitive market system. It is not a matter of socialized medicine versus capitalized medicine. Until we can have a civil discourse on the issue and remove the political agenda, we are going to continue to pay twice as much per capita for health care and still rank at the bottom of developed nations in most quality metrics such as infant mortality. If we can get our citizens to understand that better health is less expensive than poor health and focus more on prevention and quality with measureable outcomes, then we can and will see true health care reform."

Although Hamilton does not work as a practicing engineer, he is certain that he chose the correct path when he decided to get his bachelor's degree in engineering.

"My degree from the University of Tennessee has opened doors for me that were closed to my parents and grandparents. It provided me with an exceptional education that put me in a position to attend one of the finest medical schools in the country," Hamilton commented. "The engineering curriculum fostered a work ethic that served me well in medical school and throughout my professional life. While the 'art' of medicine is something that you really don't learn in school, the analytical foundation that I received in chemical engineering made me a more complete physician because of the problem solving skills that I developed at UT."

Hamilton is married to the former Arnetta Davie and they have four children: Corey, Janean, Lance and Myles. He practices in the Brentwood office of Centennial Pediatrics.

1970s

Paul E. Cate (BS/EE '73), vice president of CTI Engineers Inc., has been elected treasurer of the Chattanooga chapter of the American Council of Engineering Companies of Tennessee. He resides in Chattanooga, Tenn.

Mark D. Bryant (BS/ME '79) has been named vice president of Lockheed Martin's External Take Program at the NASA Michoud Assembly Facility in New Orleans. He resides in Slidell, La.

1980s

John Wimberly (BS/ME '81), president of I.C. Thomasson Associates Inc., has been elected director-at-large for the American Council of Engineering Companies of Tennessee. He resides in Brentwood, Tenn.

Blair D. Burgess Jr. (BS/CE '86) has been named vice president of AECOM Environment. He leads the Global Manufacturing Sector Key Account Program and has been with AECOM for more than 20 years. He resides in Killen, Ala.

Charles Edward Foust Jr. (BS/ME '87) is the third generation of his family to head Clarksville Foundry, which is crafting a replica of a field six-pounder cannon used in the Civil War in honor of the Civil War Sesquicentennial in 2011. He resides in Clarksville, Tenn.

Col. John C. Paschall (BS/AE '87) was promoted to colonel in the Air Force. He resides in Liberty Township, Ohio.

1990s

David I. Kao (BS/IE '93) accepted a new position at Siemens as Director of Global Strategy and Business Development.



Christopher D. Plucker

Christopher D. Plucker (BS/ME '93) was recently named as an AREVA Engineer of the Year for 2010. He was one of seven individuals honored by the company as part of Engineers Week. He is currently the supervisor for non destructive Examination Services with the company, and was key designer for the successful Oconee Transfer System. He has been an employee with AREVA for over 17 years.

2000s

Heather Lee Buckberry (BS/IE '00), an engineer with Barge Waggoner Sumner and Cannon Inc., has become a registered fire protection engineer in the state of Tennessee. She has been with BWSC since 2000 as a mechanical engineer.

Martin Williamson (BS/NE '02, MS/NE '04, GCP/NCS '04) has passed the professional engineer exam in nuclear engineering. He is currently pursuing a Ph.D. in nuclear engineering at the University of Tennessee.

Susannah Culbertson (MS/CEE '03) recently joined Turner Universal, a subsidiary of Turner Construction Company, as a marketing coordinator. She lives in Nashville, Tenn

Memorials



Dr. James Lindsay White

Dr. James Lindsay White, a former University of Tennessee materials science professor, died on November 26, 2009 in Germany. White was a pivotal figure in defining the field of polymer engineering and founded two polymer engineering programs—one at UT and

the second at the University of Akron. He also helped to establish the International Polymer Processing Society and founded two journals: *The Journal of Polymer Engineering* and the *International Polymer Processing Journal*. He also authored over 500 scientific publications and eight books.

Engineering Entrepreneurship Minor Receives First Campaign Commitment

As a boy, Roy Martin (BS/ME '35) always liked to make things. His father's drill press, bench and vice were tools to which he was just naturally attracted. An old crystal radio he made out of an oatmeal box, wood and wire is a treasure still in the family.



Roy Martin

"We listened to the Dempsey-Tunney fight on that radio," Roy recalled.

Despite the scarcity of jobs — it was the middle of the Great Depression — Roy found a position with a company that finished textiles. His supervisor was less than thrilled to have a college graduate assigned to him, and Roy realized he would have no opportunity to learn, much less to advance — so he quit! With a streak of amazingly good luck, he found another job quickly. The Chrysler Air Temperature Company had begun packaging the pieces for air conditioning systems. Previously, businesses that wanted to air-condition their facilities had to buy individual components and put their own systems together. Essentially this concept revolutionized the product and introduced a new industry standard.

World War II put the company out of business and Roy served the war effort with the Office of Product Management (later the War Production Board). Roy kept lists of products needed to support the war and traveled to find people who could make them. Once when he could not find a manufacturer for a very specific shaft collar, Roy convinced his father to create a small business and make them for him.

Army service followed and when he returned he briefly worked for Trane Air Conditioners. But his father was ill, so he returned to Memphis where Loren Allen (son of the Allen & Hoshall founder) had just the job for him. Not only did he have the job for him, he had the girl for him! Roy met his wife, Margaret Robinson, at Allen & Hoshall. When Margaret died, they had been married for 47 years. After a number of years, Roy left Allen & Hoshall to run his own air conditioning business, but was persuaded to come back as a partner, running the Mechanical Engineering Department until his retirement.

Now 96, Roy is proud to be one of the College of Engineering's oldest living graduates and decided that it was time to do something to help other engineering students. The new engineering entrepreneurial minor seemed to fit.

"I can help students through this scholarship and support an emerging program," Roy said.

The new entrepreneurial minor began spring semester 2010 with 41 students. They will be working with patents and intellectual property, helping to take marketable ideas and turn them into viable companies. When successful, these companies frame a winning combination for patent owners, the university and the new student-led company all of which share in earnings. The region's economy gains, too. Partnering with the UT Research Foundation and Technology 2020 in Oak Ridge, an umbrella company called TNovation will provide the legal framework for students in the class to generate spin-off companies.

"The idea is to give students exposure to the broad range of skills required to succeed in a technologically-based entrepreneurial endeavor," noted Dr. H. Lee Martin (BS/ME '78, Ph.D./ME '86), who has designed the program — and also happens to be Roy's nephew. "Technology trends, intellectual property protection, ethics, communication, proposal writing and management are just some of the many topics covered. The emphasis is on not just learning, but applying the skills to create new companies and solve all kinds of problems which is the essence of engineering."

Making things work, it appears, is the essence of the Martin family legacy.

Record Year for the College Fund for Engineering



Engineering Campaign Executive Committee members present Dean Wayne Davis with personal contributions to the College Fund for Engineering during a recent meeting in Perkins Hall. Campaign Executive Committee members pictured above from left to right: Bill Moore, Ron Turner, Dean Wayne Davis, John Tickle, Chancellor Emeritus Bill Snyder and Malcolm Colditz. Committee members not pictured include Dr. Min H. Kao, Chad Holliday, Dr. Ron Nutt, Mike Crabtree and Dennis Denihan.

The College of Engineering would like to thank its alumni and friends for their generous support in 2009! Last year, over 1,200 alumni and friends supported the College Fund for Engineering and other department funds totaling \$345,000 in gifts. This total represents an increase of nearly \$100,000 from 2008. Your generosity is deeply meaningful and has a tremendous impact on the college. Recently, the College Fund for Engineering has served as a crucial resource for college-wide programming such as the Jerry E. Stoneking Engage Program and expanded advising services as well as for purchasing specialized equipment and facility renovations. Additionally,

the College Fund gives Dean Wayne Davis the ability to move quickly to address opportunities that will enhance the college as a whole or support initiatives within specific disciplines.

During 2009, new department funds were introduced in order to provide alumni and friends with the opportunity to support specific departments within the College of Engineering. Please refer to the enclosed envelope for a list of these department funds. In order to make online giving more streamlined, a new website was launched last fall. This website, www.giveto.utk.edu, makes annual giving convenient, simple and secure.

Your support is very much appreciated and helps to place the college in a position of strength when important funding decisions are made. The continued support of our alumni and friends is increasingly essential to continuing the upward trajectory of the College of Engineering in 2010 and beyond. When making your next annual gift, please check if your employer participates in a charitable matching gift program. If so, this is a wonderful method of augmenting your annual gift. Once again, thank you for your participation in support of the College of Engineering!

College of Engineering Announces New Dean's Circle

Join the inaugural Dean's Circle within the College of Engineering! Beginning in 2010, alumni and friends of the College of Engineering who make a gift(s) totaling \$1000 or more on an annual basis to the College Fund for Engineering, or one of seven department funds within the college, will be recognized in the Dean's Circle. Dean's Circle members make a significant difference as their donations provide essential support for programs, faculty, facilities, and students. Please join Dean Wayne Davis in making a Dean's Circle gift in support of the College Fund for Engineering by returning the enclosed envelope.

This year, in recognition of their support, Dean's Circle members will receive a commemorative medallion featuring Estabrook Hall. Built in 1898 and the second oldest building on campus, Estabrook Hall initially housed the Department of Mechanical Engineering. Estabrook Hall is currently home to the Jerry E. Stoneking Engage Program and the Office of Engineering Diversity Programs. In subsequent years, Dean's Circle members will receive a commemorative medallion featuring other College of Engineering academic buildings. In 2011, the Min H. Kao Electrical

Engineering and Computer Science Building will be featured in anticipation of its completion.

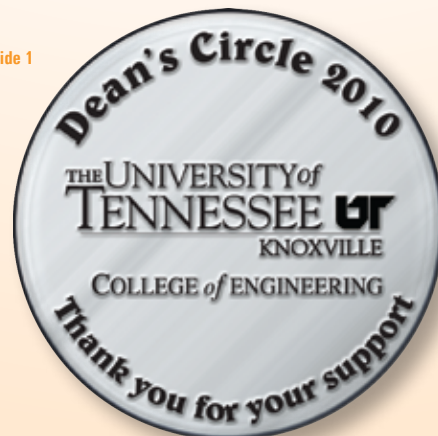
The Dean's Circle is designed to commemorate gifts of \$1000 or more each calendar year to specific gift funds that provide immediate capital for the college and departments. The qualifying funds are: the College Fund for Engineering; Chemical & Biomolecular Fund; Civil & Environmental

Fund; Electrical Engineering & Computer Science Fund; Industrial & Information Engineering Fund; Materials Science & Engineering Fund; Mechanical, Aerospace & Biomedical Fund; and the Nuclear Engineering Fund.

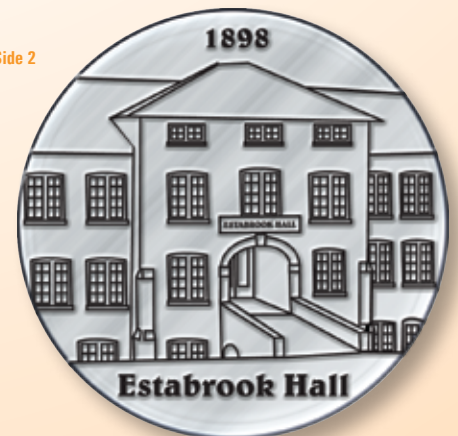
Story by Adlai Hurt

- Limit one (1) per household per year
- Corporate matching gifts do not qualify for consideration in the Dean's Circle

Side 1



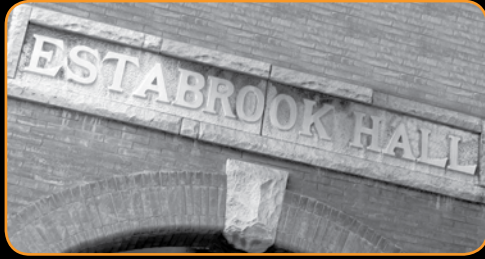
Side 2



2010 Dean's Circle commemorative medallion

THE CAMPAIGN **UT** FOR TENNESSEE

A SPIRIT • A VISION • A PLAN



Valuable traction was gained in 2009 towards the \$75 million engineering goal despite the economy. During the calendar year, \$7,788,229 was raised for the college. Additional gifts during the first weeks of 2010 bring our campaign total to \$49.5 million to date, representing 66% of the goal.

These gifts are more, however, than dollars and a percentage of a goal. They are investments in this college's future by alumni, friends and industry. We are grateful for each donor, recognizing that the gifts you make – annual, endowed, through cash or stocks, via trusts or wills – represent a commitment to engineering at the University of Tennessee. Our development professionals are here to facilitate philanthropic support, matching college priorities with donor interests. We would be delighted to talk with you about how you can make a difference.

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Christina Parsons
Advancement Specialist

Kathleen Baker
Advancement Assistant

Beyond Our Lives



When it comes to giving, one consistent theme prevails: people want to make an impact. This can take many forms, but through estate plans donors find they can make a lasting impact and, perhaps, do far more than they ever imagined. From simply including the College of Engineering in a will to more elaborate trusts and charitable gift annuities that pay income for life, designating these gifts now will influence far into the future. Most of the estate gifts noted below will be realized far into the future, but we are so pleased to have the opportunity to express appreciation now.

Faculty – the core of an excellent education

Although great engineers may be genetically predisposed to this field, it is without a doubt a great education that prepares them and gives them problem-solving discipline. And it is great professors who provide that preparation. Leonard G. Penland (BS/ME '32) affirmed this when he designated a portion of his trust to establish the Leonard Garfield Penland Chair in Engineering. He died in 2009 and the endowment has just been created. The Penland Chair is open to all engineering disciplines

“Faculty endowments enable engineering to develop its most important asset – professors,” said Dean Wayne Davis, noting that it is the faculty who teach and mentor undergraduate and graduate students. Professorships and chairs help us attract and retain the best.

Students – the reason for a great university

The Dr. Cecil O. Thomas, Jr. Endowed Scholarship/Fellowship has been established through a bequest in Dr. Thomas' living trust.

“I have always been passionate about the value of higher education. I would not have been able to enjoy such a richly-rewarding career and life if it had not been for the many opportunities afforded me by the University of Tennessee,” said Thomas (BS/NE '64, MS/NE '66, Ph.D./NE '71). “While the living trust was the best approach for me, there are other ways to give to the university. I strongly encourage anyone who has an interest in the future of the university or its students to learn more about the many opportunities for giving available to them.”

John (BS/Arch '74) and Leigh Workman have simply included engineering in their wills, designating a percentage that will establish an endowed engineering scholarship.

“My original major was engineering,” said John Workman. “Though my plans changed, my interest remained. We do not have any heirs, so we wanted to ensure that what remains of our estate goes to encourage students in their engineering education.”

Endowing a Vital Future

In business, venture funding provides capital for new enterprises. For the College of Engineering, an estate gift from Bill Cory (BS/IE '65) and his wife, Barbara, will endow resources for college-wide priorities. This major endowment will provide a steady annual income stream that will enable the dean to plan strategically, using the funds to best advantage for the college.

“Each gift in this campaign is significant,” said Dorothy Bryson. “So are the lives that inspire them. We are pleased to recognize the donors behind these important future endowments that will shape engineering education at the University of Tennessee.”

ENGINEERS *day*

Dr. Cecil Owen Thomas, Jr. Welcomes 900 Students to Engineer's Day

On Thursday, October 29, 2009, nearly 900 students from 41 different high schools (and some home schoolers) traveled to the UT Knoxville campus to explore and learn about the various aspects of engineering through discussions, project demonstrations and exhibits prepared by UT engineering student clubs and societies. Participants experienced an overview of the different engineering disciplines and saw examples of how an engineer's work impacts daily life at the annual Engineers Day.

Engineers Day has been a UT College of Engineering tradition for nearly 100 years. Each October, undergraduate engineering classes are dismissed for one day to allow university students and faculty to spend time interacting with hundreds of potential engineering students from high schools across the region.

Dr. Cecil Owen Thomas, Jr. (BS/NE '64, MS/NE '66, Ph.D./NE '71) served as the keynote speaker for the welcome session. Thomas worked for the U.S. Nuclear Regulatory Commission (NRC) in Washington, D.C., for over 24 years, and held a number of progressively responsible technical and managerial positions associated with nuclear power plant safety and regulation. While employed with the NRC, he also worked on a number of international nuclear power plant safety issues in cooperation with the International Atomic Energy Agency in Vienna, Austria, and the Nuclear Energy Agency in Paris, France.

Engineers Day features three competitions for visiting students: the Quiz Bowl, Egg Drop Competition and High School Balsa Wood Bridge Competition.

The College of Engineering thanks all of the students, sponsors, judges and organizations that made Engineers Day 2009 an incredibly successful event. The 2010 Engineers Day will be held on Thursday, October 28.

For more competition results and more information on Engineers Day, visit <http://www.engr.utk.edu/>.



Engineers Day participants look over event displays.



In 2009, the team of Shreyas Dahotre, Thomas Dai, Daniel Xu and Kevin Ye from Farragut High School, pictured with Associate Dean Masood Parang (far left), won first place. The winning team received a gold trophy as recognition of their achievement.



COE students Ben Strength (left) and Greg Peterson (right) present a gift to Dr. Cecil Thomas (center), speaker for the Engineers Day opening ceremony.



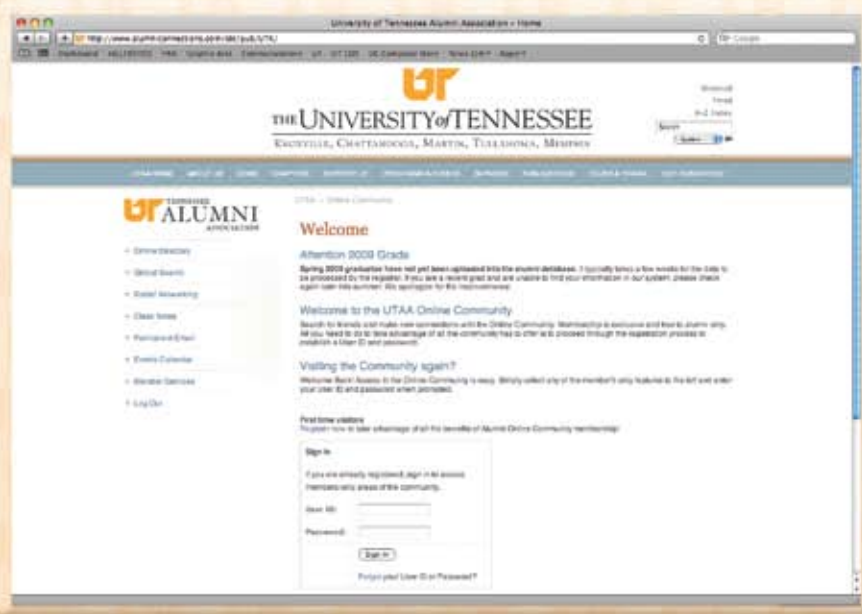
A second team from Maryville Christian School comprised of Aaron Burroughs, David Byrd, John Keyser and Cody Wiggins was awarded a silver trophy for second place.

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YOUR INFORMATION HELPS WITH OUR CORPORATE CONNECTIONS.

EVENTS & awards

Alcoa Corporation Presents Check to COE



In November of 2009, Alcoa, Inc. presented the second installment payment of \$40,000 to the University of Tennessee. Those attending were (left to right): Dr. Wayne Davis, UT COE Dean; Randy Ray, Alcoa Tennessee Engineering and Maintenance Manager; Jimmy Jones, Environmental Health and Safety Senior Consultant, Alcoa, Inc., North America; Dr. Roger Parsons, UT Director of the Office of Outreach; and Pamela Hathcock, Alcoa Tennessee Business System Manager and Campus Ambassador.

John Stevens Receives Accomplished Alumni Award



Dr. Bill Hamel, Professor and Head of the Department of Mechanical, Aerospace and Biomedical Engineering (right) presents the Accomplished Alumni Award to John Stevens (BS/ME '86) during Stevens' visit to campus on February 16, 2010. Stevens, who is Vice-President/General Manager of ITW Minigrip and Space Bag in Seguin, Texas, also spoke to Dr. Lee Martin's engineering entrepreneurship class.

EECS Professor Honored with Supercomputing Career Prize



Dr. Jack Dongarra

Dr. Jack Dongarra, a University Distinguished Professor in the Department of Electrical Engineering and Computer Science and director of the Innovative Computing Laboratory, is the first recipient of the Society for Industrial and Applied Mathematics (SIAM) SIAM Activity Group (SIAG) Supercomputing Career Prize, which was established in 2009. The recognition is awarded to an outstanding senior researcher who has made broad and distinguished contributions to the field of algorithms research and development for parallel scientific and engineering computing. Dongarra was presented with the award in February, 2010.

Tau Beta Pi Executive Director Named Fellow of ASME



James Froula

James Froula (MS/ME '68), executive director of Tau Beta Pi, the engineering honors society, has been named a Fellow of the American Society of Mechanical Engineers (ASME). Froula, who is recognized as a worldwide leader in engineering association management, is the chief staff officer for the world's largest engineering organization. Tau Beta Pi's headquarters are located on the University of Tennessee campus in the Dougherty Engineering Building. For more information on Tau Beta Pi, visit <http://www.tbp.org/pages/main.cfm> and for details on ASME, visit www.asme.org.

MSE Faculty Member is Elected Fellow in AIMBE



Dr. Mike Simpson

Dr. Mike Simpson, a joint professor with the Department of Materials Science and Oak Ridge National Laboratory, was recently elected to the College of Fellows of the American Institute for Medical and Biomedical Engineering (AIMBE). AIMBE was founded in 1991 to establish a clear and comprehensive identity for the field of medical and biological engineering, which is the bridge between the principles of engineering science and practice, and the problems and issues of biological and medical science and practice.

Calendar

Fall 2010

Classes Begin	Aug 18
Labor Day	Sept 6
Fall Break	Oct 7-8
Thanksgiving	Nov 25-26
Classes End	Nov 30
Exams	Dec 2-3, 6-9
Graduate Hooding	Dec 10
UT Commencement	Dec 11

Spring 2011

Classes Begin	Jan 12
MLK Holiday	Jan 17
1 st Session Ends	Mar 2
2 nd Session Begins	Mar 3
Spring Break	Mar 14-18
Spring Recess	April 22
Classes End	April 29
Exams	May 3-6, 9-10
Commencement	May 11-13

Contact Information

Senior Administration

Dr. Wayne Davis,
Dean of Engineering
Dr. Bill Dunne,
Associate Dean for Research & Technology
Dr. Masood Parang,
*Associate Dean for Academic
& Student Affairs*

Departments

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

Administration & Programs

Communications	974-0533
Dean's Office	974-5321
Development	974-2779
Engineering Advising Services	974-4008
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

Research Centers

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

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.

Save the Date!

Please mark your calendars now for Homecoming 2010! Saturday, November 13th

The University of Tennessee Volunteers vs. The University of Mississippi Rebels

Cheer on the Vols as they take on Ole Miss!

The College of Engineering will be hosting the Annual Alumni Homecoming Barbeque on The Hill three hours prior to kickoff.

Join us for a delicious barbeque lunch; exhibits and demonstrations; and reunions with former classmates and faculty.

Details will be available in the upcoming issue of *The Torchbearer*.

For more information, contact the Engineering Development Office at (865) 974-2779 or e-mail Christina Parsons at cparson4@utk.edu

