Dean’s Message

Welcome to our latest issue of Tennessee Engineer. It is exciting to capture in print a summary of our yearlong celebration of the 175th anniversary of offering engineering courses at the university. This issue includes features on the opening/ribbon cutting of the new one hundred ten thousand sq ft John D. Tickle Engineering Building this fall (housing the Department of Civil and Environmental Engineering and the Department of Industrial and Systems Engineering), the celebration of the 40th anniversary of the college’s diversity programs, and the 175th anniversary event which were all held on October 4. We are deeply appreciative to John and Ann Tickle for the investments that they have made and continue to make within our college and university. They, along with others who helped solidify the funds for the building, as well as numerous other alumni and friends who have made investments in other buildings and programs, have provided a foundation for our college for years to come. We sincerely thank each and every one of you for helping us achieve our mission of providing the highest quality education to our students.

Based on the outstanding growth of our college, the strong demand for engineering graduates, the quality of our students, and the need for faculty/staff growth to meet those demands, FY13 was a pivotal year for our college during which the university administration submitted a proposal to the governor’s office to provide a matching request for recurring funds to be provided to the college to address faculty/staff needs and to provide the opportunity for the college to grow an additional twenty-five to thirty percent over the next five years. The state provided a $3 million increase in the college’s base budget effective July 1, 2013. This commitment is being matched by combined funds from the chancellor’s office, the college, and from the UT Foundation (development) over the next several years to allow the college to continue its forward momentum. In anticipation of these funds, the college was able to move forward with searches for new faculty and staff hires in FY13, many of who are now part of the College of Engineering team. We feature several of our most recently hired faculty in our newsletter. These commitments, which occurred in FY13, have provided us with the opportunity to initiate searches for twenty two new faculty lines starting this fall, ranging from lecturers to chaired faculty positions.

Our newsletter also features a number of faculty members, students and alumni—as examples of the team effort being made by everyone to help meet the vision of our college. Even as we celebrate, I have included our Vision Statement as we look to the challenges and excitement of the future. I hope you will join us in our efforts to achieve our vision.

Vision Statement

The College of Engineering is resolved to become one of the country’s top 25 public engineering educational institutions. To bring this vision to reality, our college is committed to these five charges:

1. Attaining national and international recognition among peer institutions for excellence in both research and teaching.
2. Assembling a dynamic body of faculty who exemplify excellence and innovation in the pursuit and delivery of knowledge that will perpetuate the highest standards of engineering education for future generations.
3. Graduating students who are well educated in technical knowledge, with solid communication and teamwork skills, who can compete successfully in the global business world and contribute significantly to the national base of engineering and contribute significantly to the national base of engineering education and technology.
4. Investing strategically in the college’s most important resources—students, faculty and programs—through the vigorous acquisition of private gifts from individuals, corporations, and foundations.
5. Partnering with academic, industrial, and government entities that share and enhance the mission of the College of Engineering, so that our educational and collaborative efforts result in the maximum, positive economic impact locally, regionally, nationally, and globally.
John Tickle graduated from UT in 1965 with a bachelor's degree in industrial engineering. He was president of Morrison Molded Fiber Glass Company in his hometown of Bristol, Virginia, before he purchased it and renamed it Strongwell in 1997. Today, Strongwell is a worldwide operation, with the Bristol division serving as its headquarters.

Tickle is a worldwide operation, with the Bristol division serving as its headquarters.

The Tickle Building has twenty-four laboratories, three conventional classrooms, one lecture hall, three student work spaces, and sixty-three faculty and graduate student offices. The laboratories include a high-bay area for structural testing and asphalt road surface testing as well as a geotechnical laboratory. The three classrooms promote collaborative learning through the use of movable chairs and Smart Boards.

“This building continues to fuel the excitement about our research and teaching programs,” Davis said. “Our college always aspires to be better and better. The Tickles’ continual support of and belief in UT allows us to keep moving forward and create initiatives that will benefit students for generations to come.”

The John D. Tickle Building was designed by Grieve Associates Architects of Knoxville, working in association with three engineering firms: Cannon & Cannon Inc. and ICT Thomason Associates Inc., both of Knoxville, and Ross Bryan Associates Inc. of Nashville. Messer Construction of Knoxville was the general contractor.

For more information about the building, visit engr.utk.edu/tickle.
A demonstration in the Tickle building's civil and environmental engineering concrete lab.

COE staff members enjoy the networking luncheon after the Tickle building dedication.

Dean of Engineering Wayne Davis (far right) and Chancellor Jimmy G. Cheek (right) present a special gift to Ann Tickle (far left) and John Tickle (left).

COE Board of Advisors Chair Dr. Bill Eversole and his wife, Jenny, view the ice sculpture of the John D. Tickle Building pedestrian bridge at the dinner held the evening before the dedication ceremony.

Guests enjoy refreshments after the dedication ceremony of the John D. Tickle Engineering Building.

Former UT presidents Joe Johnson and Ed Boling at the dedication ceremony for the John D. Tickle Engineering Building.

Dr. Leon Tolbert (right), head of the Department of Electrical Engineering and Computer Sciences, EECS staff member Kevin Bogla, and student Mwamba Bowa wait to greet guests at the EECS reception after the dedication event.

John Scobey, the student speaker at the dedication ceremony.
**COE Welcomes Three Governor’s Chairs**

Dr. Sudarsanam (Suresh) Babu, an authority in the production, design, and performance of transforming materials into parts, has been named the tenth Governor of Tennessee-Oak Ridge National Laboratory (ORNL) Governor’s Chair. Babu will serve as Governor’s Chair for Advanced Manufacturing and will be a professor based in the Department of Mechanical, Aerospace, and Biomedical Engineering (MABE). He will also have a joint professorship with the Department of Materials Science and Engineering, and as a Governor’s Chair he will have an appointment in the Energy and Environmental Sciences Directorate and in the Energy Materials Program at ORNL.

Babu, a former professor in the Welding Engineering Program in the Department of Materials Science and Engineering at The Ohio State University, directed the National Science Foundation Industry and University Cooperative Research Center focused on materials joining for energy applications. He joined The Ohio State University faculty in 2007 following several years at the Edison Welding Institute in Columbus, Ohio. Babu has also served in multiple roles at ORNL including as a postdoctoral scholar, research professor, and member of both the research and development staff and the senior research and development staff.

Babu’s research helps widen the scope of advanced manufacturing and additive manufacturing, also known as 3D printing, which is the process of adding successive layers to make a three-dimensional solid object from a digital model. As Governor’s Chair, Babu will lead efforts to integrate the UT-ORNL Manufacturing Demonstration Facility and researchers at ORNL’s Manufacturing Demonstration Facility; conduct basic and applied research focusing on advanced products, energy-efficient design and development, and understanding a product’s life cycle and the implications of design on the product’s purpose.

Babu received a bachelor’s degree in engineering from the PSG College of Technology in 1986, a master’s degree in technology in advanced manufacturing from Cambridge University. Dr. Ramesh received a bachelor’s degree in materials science and engineering from UC Berkeley in 1987.

**MABE**

Ramesh serves as Governor’s Chair for Nanomaterials Engineering, based in the Department of Materials Science and Engineering at ETSU.

Ramesh arrived from the University of California, Berkeley, where he will continue to serve as the Pomeroy and Patty Endowed Chair in Energy Technologies in the Department of Materials Science and Engineering. In addition, he serves as a faculty senior scientist in the Materials Sciences Division at Lawrence Berkeley National Laboratory. From 2011 to 2019, Ramesh was the director of the U.S. Department of Energy’s SunShot Initiative and Solar Energy Technologies Program, which seeks to make solar energy cost-competitive with other forms of electricity by the end of the decade.

Ramesh’s research is important to the development of the next generation of thin film technology used in solar panels and computer memory. His work advances solar and information storage technology in materials science by improving energy transfer while making products thinner.

His breakthrough research has led to a new generation of computer memory devices that can retain stored information even when not powered, termed Ferroelectric Random Access Memories.

Ramesh was elected to the National Academy of Engineering in 2011 and is a recipient of the 2017 National Academy of Engineering Frontiers of Engineering Award.

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**Dean Named as Fisher Distinguished Professor**

Dr. Mark Dean (BS/EE ’79), an IBM Fellow and the company’s former vice president of Technical Strategy and Worldwide Operations, has been named as the Fisher Distinguished Professor with a tenured appointment in the Department of Electrical Engineering and Computer Science.

Dean, who received his PhD in electrical engineering from Florida Atlantic University and his PhD from Stanford, has had a long and illustrious career at IBM, where he began working with personal computers as a chief engineer at IBM in Boca Raton, Florida. Dean holds three of the original nine patents on the standard IBM personal desktop computer that serves as a basis for all personal computers and has more than forty patents pending.

Dean served in numerous executive positions during his tenure at IBM, and was named the first African-American IBM Fellow in 1995. His long list of honors and awards includes the University of Tennessee’s highest honor, the Distinguished Alumnus Award, in 2012; the National Institute of Science (NIST) Outstanding Scientist Award in 2006; the UT College of Engineering’s Nathan W. Dougherty Award in 2005; membership in the prestigious National Academy of Engineering in 2001; the Black Engineer of the Year Award from the Carair Communications Group in 2000; Distinct Golden Torch Award, National Society of Black Engineers, 1999; and induction into the National Inventors Hall of Fame in 1997.

He also received the US Department of Commerce’s Ronald H. Brown American Innovators Award and is a Institute of Electrical and Electronics Engineers (IEEE) Fellow and a National Society of Black Engineers (NSBE) Distinguished Engineer.

Dean was also a longtime member of the UT College of Engineering’s Board of Advisors.

**Two COE Professors Receive NSF CAREER Awards**

Dr. Jason P. Hayward, an assistant professor in the Department of Mechanical Engineering, and Dr. Jeffrey A. Reindl, an assistant professor in Mechanical Engineering, have both received the Early Career Research Awards (CAREERs) from the National Science Foundation.

The CAREER award is the NSF’s most prestigious honor for junior faculty members. The award provides research support, outstanding education, and the integration of education and research within the context of the mission of their organizations.

Hayward’s award includes total funding of $750,000 over five years to develop the research outlined in his proposal “Neutron Scattering Characterization and Development for High Spatial and Temporal Resolution Imaging at Oak Ridge National Laboratory.”

Reindl’s award includes a $470,000 grant over five years for his research proposal “Research and Education on Control of Human Movement.” The CAREER project will allow Reindl and his graduate students to develop scientific tools and simulations to improve rehabilitation for stroke victims.

For more information, visit [http://science.energy.gov/early-career](http://science.energy.gov/early-career).

Dean Wayne T. Davis has recently named two new department heads for the College of Engineering.

Dr. John E. Kobza, previously the interim Department Chair of Industrial Engineering and Senior Associate Dean for the Edward E. Whitacre College of Engineering at Texas Tech University in Lubbock, Texas, is the new professor and department head of the Department of Industrial and Systems Engineering (ISE).

Kobza received his BS degree in electrical engineering from Washington State University, his MS degree in electrical engineering from the University of Tennessee at Knoxville, and his PhD in industrial and systems engineering from Virginia Polytechnic Institute and State University.

He began his career as an assistant professor in the Department of Industrial and Systems Engineering at Virginia Polytechnic Institute and State University, then joined the Department of Industrial Engineering at Texas Tech as an associate professor and was promoted to full professor in 2006. He was the associate department chair from 2006-2008 and was named senior associate dean in 2009. He served as interim department chair beginning in 2012. Kobza also was an instructor for the Department of Industrial Engineering at Kasetsart University in Bangkok, Thailand, in 2012.

Kobza has provided expertise for numerous media reports and has been inducted into the Texas Tech University Teaching Academy in 2002.

Dr. Matthew M. Mench, a professor in the Department of Chemical and Biomolecular Engineering, was named head of the Department of Mechanical, Aerospace, and Biomedical Engineering (MAE).

Mench received his BS, MS, and PhD degrees, all in mechanical engineering, from Pennsylvania State University.

Mench was awarded a National Science Foundation Early Career Development (CAREER) Award in 2007 to support his research on exascale computers.

His project, the Parallel Runtime Scheduling and Execution Controller (PaRSEC), was the next generation of supercomputers to provide a broad range of industries, including energy, pharmaceutical, and transportation, the ability to more quickly engineer superior new products, which will translate into better consumer technology.

Dr. Jack Dongarra, a professor at UT in 2010 as a professor and the Candia Chair of Excellence in Energy Storage and Conversion and a professor in mechanical engineering at the University of Tennessee, is the new department head of the Department of Mechanical, Aerospace, and Biomedical Engineering (MAE).

Mench also serves as the executive vice president of the American Society for Engineering Education.

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He began his career as an assistant professor and research associate in the Department of Mechanical Engineering at Pennsylvania State University. He was promoted to associate professor a year early in 2007. Mench joined the faculty of MAE at UT in 2010 as a professor and the Candia Chair of Excellence in Energy Storage and Conversion. Mench also has a joint faculty appointment with Oak Ridge National Laboratory (ORNL) and has a joint courtesy faculty position with the Department of Chemical and Biomolecular Engineering.

The University of Tennessee Research Foundation (UTRF) has recently announced a new benchmark for measurement that will be released in time for the next TOP500 list release in November 2013. Working with his colleague, Michael Heroux, from Sandia National Laboratories in Albuquerque, New Mexico, Dongarra is developing a new assessment method, the High Performance Conjugate Gradient (HPCG).

Plans are for the next generation of supercomputers to provide a broad range of industries, including energy, pharmaceutical, and transportation, the ability to more quickly engineer superior new products, which will translate into better consumer technology.

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Mench was awarded a National Science Foundation Early Career Development (CAREER) Award in 2007 to support his research on fuel cells. He is the author of the textbook Fuel Cell Engines, over one hundred research publications, and holds several patents. His research work has been supported by numerous industrial and government agencies.

In 2013, Mench was named as a UT College of Engineering Research Fellow. He received the Premier Teaching Award in 2009 and the Outstanding Teaching Award in 2006 from the Penn State Engineering Society.

Mench also serves as the executive vice president of the International Society for Hydrogen Energy and is an associate member and a former member of the editorial board of The International Journal of Hydrogen Energy.

Mench is a Fellow of the American Society of Mechanical Engineers. He is also a member of the Electrochemical Society and the American Society for Engineering Education.

Both appointments were effective August 1, 2013.
Gift Establishes UT Joint Faculty Fellowships of Business and Engineering

Dr. Chanaka Edirisinghe
Gift Establishes UT Joint Faculty Fellowships of Business and Engineering

She enthusiastically supports the interaction between business and administration through the university’s registered dietitian program. said Heath. 

Chanaka Edirisinghe, professor of statistics, operations, and management science, is the Heath Faculty Fellow in the College of Business Administration. Rupy Sawhney, a professor of industrial and information engineering, is the fellow in the College of Engineering.

Heath recently retired as president of Lockheed Martin Aeronautics. He is a founding and current member of the College of Business Administration’s Aerospace and Defense Advisory Board, a lifetime member of the college’s Advisory Council to the Dean, a member of the College of Engineering’s Board of Advisors, and a recipient of UT’s Alumni Professional Achievement Award. He inspired the College of Business Administration to create its unique Aerospace and Defense MBA Program. 

“I believe strongly that engineering and business need to become more engaged at the university level so that when our graduates begin to practice and lead in industry they are better prepared,” said Heath.

Janet Heath graduated in 1976 with a degree in food systems administration through the university’s registered dietitian program. She enthusiastically supports the interaction between business and engineering and collaborated with her husband on the proposal for the joint faculty fellowship.

Edirisinghe is the director of the management science doctoral program, co-director of the Business Analytics Forum, and director of the business college’s Financial Engineering Research Laboratory. He specializes in operations research/management science with applications to financial investments, project management, supply chain coordination, reservoir scheduling, and fleet routing. He is the developer of the financial trading strategy optimization and simulation software called Mi$OFT and a recipient of the prestigious 2009 Citation of Excellence Award by Emerald Management Reviews.

“There is great wisdom, foresight and creativity in this gift from Ralph Heath, born from his lifetime of management experience in both engineering and business,” said Steve Mangum, dean of the College of Business Administration. “The Heath Faculty Fellowship program provides specific opportunities for two leading faculty members from these two colleges to permeate barriers, be innovative, and initiate constructive dialogue and programming.”

Sawhney is a faculty member of the Center for Interdisciplinary Research and Graduate Education, a joint effort between UT and Oak Ridge National Laboratory focused on renewable energy; a 2006 Boeing Welliver Fellow; and a recipient of the Lean Fellowship since 1998. He specializes in the development of supply chain management models and enterprise improvement strategies, and integrating reliability into lean systems. Through his Lean Fellowship, he has worked to develop new methodologies and tools to make US manufacturing more competitive. He has worked with more than one hundred fifty industrial and governmental organizations, including UT.

“The Heath Fellowship provides a unique opportunity to identify and encourage interaction and collaboration between our two colleges,” said Wayne Davis, dean of the College of Engineering.

Funding to recruit and retain top faculty is part of the chancellor’s roadmap to achieve Top 25 status. Through the Chancellor’s Faculty Challenge, his office funds interest income immediately on all new gifts and five-year pledges that donors intend to establish over a period of time in support of faculty. By providing immediate endowment income to be used for salary support, the chancellor is enabling academic units like the colleges of business administration and engineering to have an immediate impact in recruiting and retaining outstanding faculty.

NE Department Head to Serve as NEDHO Vice Chair

Dr. J. Wesley Hines

Dr. J. Wesley Hines

Call 865-974-2779 or visit engr.utk.edu/give

Dr. James Plank, a professor in the Department of Electrical Engineering and Computer Science, is the recipient of a 2012 IBM Faculty Award. The thirty thousand dollar award is highly competitive and recognizes the quality of an academic program and its importance to industry.

The award originated out of a collaboration with Jim Hafner, a researcher at IBM, with whom Plank worked on fault-tolerant storage systems. The project is to enrich the failure handling capabilities of key-value stores, which allow systems like Facebook and Twitter to store and propagate the millions of simultaneous updates that they get from their millions of distributed users. Plank will be using the award to fund student research.

Support a UT professor forging new frontiers of knowledge. Learn how you can invest in a professorship. Call 865-974-2779 or visit engr.utk.edu/give

Dr. Mongi Abidi

Cook-Eversole Professor
Department of Electrical Engineering and Computer Science

Giving makes a difference.

Learn how you can invest in a professorship.
Dr. Steven M. Abel

Assistant Professor
PhD: Stanford University

Research areas: Applications of nanotechnology to biological systems.

Dr. Andrew Yu

Assistant Professor
PhD: University of Notre Dame

Research areas: Mechanics of composite materials, modeling and simulation of material properties.

Dr. Dr. Kimberly Carter

Assistant Professor
PhD: University of Arizona

Research areas: Analysis of trace metal content of synthesis gas derived from coal, irradiation and adsorption of perfluorinated compounds and technology for remediation of brine spills with high correlation of plant growth with brine content in soil.

Dr. Jon Hathaway

Assistant Professor

Research areas: High efficiency power conversion, energy harvesting, implantable devices, and electric vehicles.

Dr. Dr. Oleg Shylo

Assistant Professor

PhD: University of Florida, Gainesville, FL

Research areas: Electronic and atomic-level simulations of defect properties and evolution in advanced structural and energy materials.

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Dr. Dr. Oleg Shylo

Assistant Professor

PhD: University of Florida, Gainesville, FL

Research areas: Electronic and atomic-level simulations of defect properties and evolution in advanced structural and energy materials.

Dr. Caleb Bucker

Assistant Professor

PhD: Vanderbilt University

Research areas: Robotics, solid mechanics, medical applications, computer-aided surgery.

Dr. Adrijna Sharma

Research Assistant Professor
PhD: University of Tennessee

Research areas: Musculoskeletal mechanics, medical applications, laser-nanosurgery and cell transfection.

Dr. Eric Wade

Assistant Professor
PhD: University of Helsinki, Finland

Research areas: Fusion, reactor materials, plasma-surface interactions, atomistic simulations.

Dr. Dr. Tim Truster

Assistant Professor
PhD: University of Tennessee

Research areas: Ion-matter interactions, radiation damage, high-pressure studies, nuclear materials science.

Dr. Jae-Hyeok Shim

Research Assistant Professor
PhD: Seoul National University, Korea

Research areas: Energetic materials, computer simulation, thermodynamics, phase transformation.
Four new faculty members will join the COE in early 2014. Dr. Robert Coridan will be an assistant professor in the Department of Chemical and Biomolecular Engineering. In the Department of Civil and Environmental Engineering, Dr. Shashi Nambiar will join as a professor and Dr. Thanos Papanicolaou will be the Goodrich Chair of Excellence Professor. Dr. Janice Tek will join the Department of Industrial and Systems Engineering as an assistant professor in February 2014, working from the UT Space Institute. Dr. Laurence Miller will join the Department of Industrial and Systems Engineering as an assistant professor in early 2014.
Dr. Mingjun Zhang, an associate professor in the Department of Mechanical, Aerospace, and Biomedical Engineering, has a long-term goal for his research: to develop fundamental theory and engineering principles for building nanoparticle-based systems that have sensing, actuation, and decision-making capability for disease diagnosis and treatment. To address the challenges for small-scale propulsion, he also works on bioinspired energy-efficient propulsion systems for robotics.

“Two fundamental questions to be addressed in my research are related to healthcare and energy utilization,” Zhang said. “One is about characterization and fabrication of naturally occurring/bioinspired nanoparticles. The other is the development of bioinspired energy-efficient aquatic propulsion systems.”

Zhang’s initial interest in the clinging properties of the English ivy plant inspired some of the research on nanoparticle-enhanced adhesion. He, along with colleagues, developed an approach to isolate, purify, and characterize nanoparticles secreted from adventitious roots of the English ivy. He sees applications from this discovery as having merit for military and medical applications.

Zhang was also inspired by nature’s design principles of energy-efficient swimming and robust attachment mechanisms from several microorganisms, employing principles learned from biology for innovation in propulsion system design for underwater unmanned vehicles and robots.

“We have made several original discoveries about naturally occurring nanoparticles, and biological propulsion mechanisms for microorganisms,” Zhang said. “In 2008, we discovered that the ivy secretes nanoparticles for surface adhesion, and that the ivy nanoparticles might be used for sunscreen to replace metal-based nanoparticles. In 2010, our group found that the highly elastic adhesive secreted from sunflower plants could be used to create nano-scaffolds for tissue engineering. In 2011, we discovered the unique multilamella-based swimming mechanism of Gandia, and proposed a bio inspired energy-efficient propulsion mechanism for micro/nano-robots. In 2012, our group discovered that the curved swimming trajectories were more energy efficient than linear trajectories for whirligig beetles, which explains why they are more often observed in nature. Recently, we discovered that the nanoparticles secreted from a carnivorous fungus can stimulate immune response, and kill tumor cells. We have developed a sitting drop culture method to massively produce the fungus-based nanoparticles. We have also developed a technique to produce tea nanoparticles from tea leaves for drug delivery and therapeutics.”

Zhang’s research has drawn increasing recognition internationally. Results from his research have been well archived in leading journals, including Proceedings of National Academy of Sciences, Advanced Functional Materials, Journal of the Royal Society Interface, PLoS Computational Biology, Nano Letters, Nanomedicine, Journal of Nanotechnology, Journal of Biomedical Nanotechnology, and many others. His projects on naturally occurring and bioinspired nanoparticles are supported by three National Science Foundation (NSF) Awards, one Army Research Office (ARO) Award, and an ARO Defense University Research Instrumentation Program (DURIP) award. His research on micro/nano-scale propulsion was sponsored by the prestigious Office of Naval Research (ONR) Young Investigator Program (YIP) award and a new ONR DURIP award in 2013. While the recognition and funding support are gratifying, it is also extremely important to Zhang that students are also included in all of his research.

“Undergraduate and graduate students are heavily involved in research projects in my lab,” Zhang said. “I believe, each funded research project in my group has at least one undergraduate student contributing to experimental studies or computer simulation.”

UT students will soon get the chance to gain practical engineering analysis skills using technology that companies worldwide rely on to design sophisticated products for aerospace, mechanical, biomedical, and other industries.

The classroom enhancements are made possible through an in-kind software grant with a commercial value of $2.7 million from Siemens PLM Software. The product lifecycle management (PLM) software helps users make better products using complex modeling techniques. The in-kind grant includes Femap(TM) software with NX(TM) Nastran(TM) software for finite element modeling. Students in Department of Civil and Environmental Engineering Assistant Professor Stephanie TerMaath’s three classes will use the software to investigate fundamental concepts in structural engineering; for example, how applying different boundary conditions such as loads and supports to a part affects structural performance.

“This technology allows class to be very hands-on,” said TerMaath. “We can interactively investigate customizable problems very quickly instead of me just showing them pictures in a PowerPoint presentation. Use of this software provides a much improved learning environment by providing the flexibility to explore an unlimited number of configurations in real time based on student questions.”

The software will impact close to a hundred students through TerMaath’s classes and research, and is available through UT’s app to anyone at the university who wants to use it.

“Siemens’ academic program delivers PLM software technology to more than a million students from grade school to graduate school around the world each year. "Siemens PLM Software is dedicated to equipping today’s students with the knowledge and skills necessary to serve in the next generation of engineers. UT serves a key role in filling the science, technology, engineering, and mathematics job skills gap and producing highly qualified future employees," said Bill Boswell, senior director, partner strategy, Siemens PLM Software.

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Global Initiatives: Engineering Students Travel to Costa Rica, Madrid, and Peru

Outreach

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Students Enjoy Faculty-led Study Abroad Programs

Inspired by the Chancellor's Honors Program decision to require an international or international experience for honors students, the Office of Engineering Outreach began a targeted effort to increase engineering-student participation in study-abroad programs by offering faculty-led courses. The effort has shown healthy results. In the 2009-2010 school year, eighteen students participated in study abroad, but only three took engineering courses. Fifty-eight COE students participated in 2011-2012, with twenty-nine taking engineering courses. For 2012-2013, a total of eighty-five COE students participated, with forty-seven taking engineering courses.

For 2013, Engineering in London combined two programs from the summer of 2012, with students taking two out of three course offerings in a five-week format. Courses were: Development of Thermoelasticity, taught by Dr. Roger Parsons, director of Engineering Outreach; and an electrical engineering course, Electromechanical Components, taught by Dr. Paul O'Brien, associate professor in the EECS department.

Another initiative that resulted in a significant engineering study-abroad experience in 2013 was the UT COE/Department of Mechanical, Aerospace, and Biomedical Engineering partnership with the Polytechnico di Torino (PdT). Turin, Italy. Six mechanical engineering seniors spent their final semester in spring of 2013 at PdT. Turin is the home of FIAT, and PdT has a significant reputation in automotive engineering and design.

Water Resources and Climate Change in the European Alps (now a joint trip with the University of Alabama) was also offered again in 2013, led by Dr. Glenn Tooltz of the civil engineering department and based in Innsbruck, Austria. This course offered technical elective credit that was applicable to most engineering curricula. For more information, visit http://www.engr.utk.edu/outreach.

“Students enjoyed a three-hour bike ride that included a visit to one of the largest parks in Europe, which is constructed over the top of a highway. Afterward, they attended a lecture on alternative energy sources, given by a Spanish engineer/entrepreneur.”

A cultural excursion took the trio to the town of Segovia, where they viewed aqueducts constructed in the first century by the Romans, as well as the Castle of Queen Isabella’s court, erected in the twelfth century.

Near Segovia, they visited the Instituto Nacional de Tecnica Aeroespacial (INTA), a contingent of NASA. Its budget of more than $50 million comes from the Spanish Ministry of Defense and from its own projects with industry. Some of the scientists and engineers at INTA design and build unmanned craft used in drone strikes, and several of these craft were on display. At the site’s astrophysics facility, the group viewed a lab that replicates rivers believed to have once existed on Mars.

Six COE students traveled to Peru August 10-20, 2013. They visited the city of Cuzco and the Manu Biosphere Reserve in the Amazon Rainforest, both designated UNESCO World Heritage Sites. Students involved were Stephanie Kerrigan, Bryan Medina, Mark Nichols, Drew Keller, Shivam Zaveri, and Nathan Siler.

Students experienced multiple trips to sites related to the Industrial Revolution and the development of computing, providing context and enrollment opportunities.

“The London trip is amazing,” said James Alfred, a junior in computer science. “There is a lot to experience and discover.”

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When it comes to the University of Tennessee College of Engineering, Dr. Wayne Coleman (PhD/NE’69) and his wife Barbara have always generously served and promoted the mission of the college. As a student, Coleman was president of the Student Government Association, a member of Tau Beta Pi Honor Society, Sigma Chi Fraternity, and a Torchbearer (by the way, he also played on the football team). Today, he serves as a member of the College of Engineering’s Board of Advisors. The Colemans’ Volunteer spirit was apparent again when they hosted a group of alumni, students, and faculty for a reception at their home in Solana Beach, California, on the evening of May 22, 2013. The event was an opportunity for UT engineering alums in the San Diego area to gather and connect. It was also an opportunity for those alumni to meet a team of talented students and faculty who had been participating in the prestigious EcoCAR2 competition in nearby downtown San Diego.

The setting of the reception on the back lawn of the Coleman’s home provided a spectacular view of the Pacific Ocean. After the guests had arrived, everyone mingled and were introduced to each other, then settled down to a delicious outdoor dinner. Alumni who attended the reception included Dr. Calvin Burgart (PhD/NE’69) and his wife Michelle (JD/Law’77), Howard Chambers (BS/ME’64), Richard Rosenberg (BS/ME’64) and his wife Ellen, and John Stevenson (MS/EE’60) and his wife Dalys. Future UT engineering student Stephen Kwan and his mother Lina also attended the reception.

After dinner, Dr. Butch Irick of the Department of Mechanical, Aerospace, and Biomedical Engineering, who is a faculty advisor to the UT Knoxville EcoCAR2 team, spoke about the competition and his team’s role in it.

The competition’s mission is to offer an unparalleled hands-on, real-world experience to educate the next generation of automotive engineers. The competition challenges fifteen universities across North America to reduce the environmental impact of a Chevrolet Malibu without compromising performance, safety, and consumer acceptability,” said Irick.

After taking a few questions, Dr. Irick, his co-advisor Dr David Smith, and the students presented the Colemans with official EcoCAR2 Team Tennessee polo shirts and thanked them for hosting the event.

As the evening drew to a close, Wayne and Barbara remarked, “It was really great to see the alumni that came this evening, but also the interaction we got to have with the students and faculty was a helpful experience. After all, the students are our future.”
College of Engineering Celebrates 175 Years of Engineering at UT with Gala Event

The College of Engineering celebrated 175 years of engineering instruction at the University of Tennessee with a gala event on Friday, October 4, at the Knoxville Convention Center. A crowd of over five hundred and fifty engineering alumni, faculty, and staff gathered to recognize this significant milestone.

At the elegant reception, guests enjoyed the opportunity to visit with all seven COE department heads and connect with former classmates and professors. Tennessee Governor Bill Haslam dropped by and greeted several attendees, including John and Ann Tickle, who were special guests at the event. The Tickles provided generous support for the new John D. Tickle Engineering Building, which was dedicated earlier that day in an impressive outdoor ceremony.

Other special guests at the event included family and friends of John and Ann Tickle from around the country. Representatives from professional engineering organizations included Jim Froula, executive director emeritus, and Curt Gomulinski, executive director, of Tau Beta Pi, the national engineering honor society, which is housed on the UT campus in the Dougherty Engineering Building; Marc Apter, president, the Institute of Electrical and Electronics Engineers; Larry Satkowski, vice president, the Institute for Nuclear Materials Management; and Stacey DeVecchio, president of the Society of Women Engineers. Numerous members of the college’s Board of Advisors were also in attendance.

After the reception, guests moved into the main ballroom, highlighted with dramatic lighting donated by UT alumnus Michael Strickland, the CEO of Bandit Lites, for the dinner and program. UT Board of Trustees member and industrial engineering graduate Spruell Driver was emcee for the event, which featured remarks from Chancellor Cheek and Dean Davis.

Guest speaker Celeste Baine, a biomedical engineer, director of the Engineering Education Service Center in Oregon, and the award-winning author of over twenty books on engineering careers and education, provided educational entertainment during her presentation, titled The Wow! Is Engineering. A video on the history of engineering, introduced by veteran UT faculty member and chemical engineering emeritus professor Dr. John Prados, a member of the college’s planning committee for the event, received an enthusiastic ovation from the crowd.

The surprise came at the end of the evening, when John Tickle took the stage and announced that he and donors Chad and Ann Holliday, Joe and Judy Cook, and Eric and Elaine Gaal, had established the Wayne T. Davis Chair in Engineering. The chair was named in honor of Davis, the current engineering dean.

The gala was the final event in a two-day celebration of engineering that included a dinner with fireworks honoring the Tickles on Thursday, October 3; the dedication and ribbon cutting at the John D. Tickle Engineering Building on October 4; and the luncheon program featuring alumni and students to celebrate the 40th anniversary of Engineering Diversity Programs that same day.
EDP Celebrates 40th Anniversary

On Friday, October 4, at noon after the dedication ceremony, a group of engineering alumni, faculty, students, and special guests gathered at The Foundry, where the College of Engineering hosted a luncheon honoring the 40th anniversary of its Engineering Diversity Programs (EDP).

The crowd of over one hundred and twenty attendees was welcomed by COE Dean Wayne T. Davis, and Chancellor Jimmy G. Cheek also offered remarks recognizing the 40th anniversary of the college’s diversity programs. Rodney Brooks (BS/ME ’85, Group 8), a mechanical engineering alumnus and vice president of ABB in Alamo, Tennessee, also spoke, recognizing the origins of engineering diversity initiatives that began with the Minority Engineering Scholarship Program (MESP) which was established by the college in 1973 under the direction of the late Fred Brown, Jr.

“The university has shown its greatness in the College of Engineering through its commitment to the diversity programs over the past forty years. To be able to celebrate forty years of diversity demonstrates the unwavering commitment by the leadership at UT,” said Brooks. “The future is bright to be a Top 25 university through the efforts of the engineering leadership along with the campus administration. Seeing the new Fred Brown Dormitory validates his efforts to provide opportunities to many students whose lives were impacted in a very positive manner by being a part of the College of Engineering. I am very proud to be a VOL!”

Special tributes were given to the National Society of Black Engineers; the National GEM Consortium; the EDP summer pre-college programs; the Society of Hispanic Professional Engineers; and the Tennessee Louis Stokes Alliance for Minority Participation.

The two previous directors of the program, Brown and James Pippin, also received recognitions. Pippin was present at the event, and graciously acknowledged the current EDP director, Travis Griffin.

“An exciting event to behold was the return of the first group of students recruited by Mr. Fred Brown and those whom I recruited when they converged for the 40th Anniversary Celebration of the Minority/Diversity Engineering Programs,” Pippin said. “The establishment of the James T. Pippin Diversity Engineering Scholarship and the increased number of PhD degrees in medicine, engineering, and law as well as MBA degrees for underrepresented students as a result of the EDP I consider to be two of my greatest contributions to the College of Engineering.”

Special guests at the event included Cavanaugh Mims (BS/NE ’86, Group 9), a nuclear engineering graduate and president of the UT Alumni Board of Directors, and his wife, Telicia; and Dr. Mark Dean (BS/ECE ’89, Group 2), co-inventor of the personal computer, former IBM Vice President and Fellow, and the new John Fisher Distinguished Professor in Electrical Engineering and Computer Science, and his wife, Denise, along with his parents James and Barbara Dean.

“The 40th Anniversary Luncheon for the Engineering Diversity Programs brought me back to the place and connected me with the people where engineering and I became one,” said Tiffany Grant, CEO of TEGrant Consulting and a member of MESP Group 25. “I walked up to the third floor of Perkins Hall and went straight to the lecture hall. Filled with emotions of gratitude and pain, I said, ‘STATICS!’—that was my beginning, and I am grateful to Mr. James T. Pippin, the engineering diversity initiatives, and Group 25 for support, love, encouragement, and access over the past sixteen years. The importance of what I received is almost impossible to put into words, but I hope for all students to be recipients.”

Enjoying the 40th anniversary luncheon (left to right): Trevor Williams, Tiffany Grant, former EDP director James Pippin, Darius James, and Erica Echols.
Students start day one of the eVOL9 program.

The dyno-MITES participants discovered new engineering experiences through activities titled “Single Machines!” “Day & Buggy Cars,” “Gummy Bear Towers,” and “Hover Puck Shuffleboard.” Dyno-MITES participants were divided into groups of two to three and engaged in engineering design projects focused on vehicle design. Participants worked in teams to design, construct, and present model cars and cars that operated on solar energy. The program provided an engineering field trip to the American Museum of Science Energy as students learned the history behind Oak Ridge, the first atomic bomb, how nuclear power works, and more. The week was one full of laughter, competition, and fun.

After surveying the dyno-MITES participants, 100% are interested in pursuing a career in engineering. The participants rated “Engineering 101” with Retherford as the best experience.

The First Engineering Volunteers for Ninth Graders (eVOL9) kicked off on June 23-28, 2013, with thirty-one rising ninth grade students, of which 52% were past MITES participants. Battelle and the Tennessee Science, Technology, Engineering, and Math (STEM) Innovation Network sponsored the 2013 eVOL9 program. The purpose of eVOL9 is to engage students in hands-on engineering activities, ACT math preparation, and show the application of math and science. Betsy White of the Engineering Fundamentals program.

The eVOL9 participants engaged in features publishing bridges, global warming, mammalian cutaways, and aerodynamics. Gilbert provided an introduction to ACT math through workshops and workshops focused on pre-algebra, algebra, and intermediate algebra. Based on pretest and post-test assessment, 77% of the participants improved their pre-Act math scores.

The eVOL9 participants were divided into groups of three to four and worked on engineering design projects focused on strength of materials. Guest speakers included Dr. Jenny Retherford, a lecturer within the Department of Chemical and Biomolecular Engineering; “Engineering Design” with Dr. Chien-fei Chen and Erin Wills of the Center for Ultra-Wide-Area Resilient Electric Energy Engineering; “Engineering Design” by Travis Griffin.

In addition, participants developed and presented a PowerPoint presentation outlining their chair’s engineering design process and a commercial to market their chair to their peers, faculty, sponsors, and special guests.

On Thursday, eVOL9 students participated in a special presentation of a Toyota display titled “Toyota Car Competition,” sponsored by Toyota. The program provided an engineering field trip to Alcoa Aluminum in Alcoa, Tennessee, as students learned the history behind Alcoa and the aluminum engineering design process, took an official plant tour, and more.

After surveying the eVOL9 participants, 97% are interested in pursuing a career in engineering. The participants rated the chemical car design project as the best experience of the week.

The college hosted two sessions of the 13th Annual High School Introduction to Engineering Systems (HITES) program, one sponsored by Eastman and one by Bechtel.

Eastman HITES was hosted July 14-19, 2013, and Bechtel HITES on July 21-26, 2013, providing engineering immersion to fifty-eight rising ninth and tenth graders. Each session featured an orientation for students and parents, housing accommodations at Hess Residential Hall, and a closing awards ceremony.

The 26th annual Middle School Introduction to Engineering Systems (MITES) commenced on June 16-21, 2013, with thirty-one rising seventh and eighth grade students. Each session kicked off with an orientation for students and parents, housing accommodations at Hess Residential Hall, and an awards ceremony.

The chemical car design project introduced the engineering design process, allowed students to work in teams to brainstorm, design, build, test, and improve a car powered by a chemical reaction. The materials provided were K’Nex materials, one roll of duct tape, and a two-liter soft-drink water bottle. In addition, participants developed and presented a PowerPoint presentation outlining their car’s engineering design process and a commercial to market their car to their peers, faculty, sponsors, and special guests.

The program provided an engineering field trip to the Proctor & Gamble (Duracell) plant in Cleveland, Tennessee, where students learned the history behind the company and the battery design process, took an official plant tour, and more.

After surveying the eVOL9 participants, 100% are planning to pursue a career in engineering. The participants rated the chemical car design project as the best experience of the week.
Jamie Thomas (BS/CS '85), a general manager with international corporation IBM, got interested in engineering early through the influence of her father, who was an electrical engineer and was a textile engineering major at Georgia Tech. Thomas, who was born in Louisville, Georgia, and grew up for the most part in Chattanooga, saw her father’s interest in information science broaden within his career in the textile industry, and with his encouragement she chose to major in computer science at UT.

“The software engineering field was not well understood when I was in high school, but I was interested in science in general and decided to give it a try in college,” Thomas said. “UT had a solid computer science program with the College of Arts and Sciences at that time. I also was offered a first-year scholarship as a valedictorian and I later won an upper class Roddy Scholarship.”

Thomas enjoyed the people she met on the university’s campus, particularly those in the computer science program who already had workforce experience coming back to school for the second round to major in the discipline. Thomas also co-oped with the Department of Energy in Oak Ridge.

“The co-op job was one of my most memorable experiences with UT and it really enabled me to be more competitive when I graduated,” Thomas commented. “The faculty were also great at the university—less a math minor as well as a computer science major. The faculties in both departments were dedicated to the students and to learning overall.”

Thomas was a College of Arts and Sciences top graduate, and had the exciting experience of having Alex Haley being the commencement speaker during her ceremony in 1985. Haley’s book Roots was a national phenomenon, and getting the opportunity to meet the internationally famous author was a real highlight of Thomas’ tenure at UT.

After UT, Thomas joined IBM as a programmer in the Research Triangle Park location in North Carolina. After four years, she moved into management, and over the years moved up the management chain within the software organization. Thomas managed networking software, the WildSphere Product Software and Strategy, Rational Product Software and Strategy, and the Tivoli Product Software and Strategy. The WildSphere brand was created organically within IBM but both Rational and Tivoli were acquired initially. Today, Thomas is a General Manager for the Software Defined Environment Strategy within IBM’s Server and Technology division, responsible for how software will enable the next generation of automation for data centers.

“My most proud accomplishments at IBM are really what I was able to achieve for my clients I worked with over the years and for my employees,” Thomas said. “With clients, I’ve formed relationships with certain organizations that have lasted for more than ten years across various industries. I’ve chosen to focus on specific regions of the world, including the United Kingdom, Germany, Japan, and Indonesia to better build relationships in those regions with both our sales teams and the clients. I’ve been managing global teams for more than fifteen years, and working with employees from North America, South America, Europe, and Asia has been very rewarding. In my last role, I managed over twenty sites worldwide. I’ve also seen so many acquired organizations join our company in this software arena and I am very proud of the employees I’ve mentored in these companies.”

Thomas said the electrical engineering and computer science field will experience tremendous growth in the years to come, with topics like cloud computing, big data, social media, and mobile being a few of the driving forces behind this growth.

“I think that UT is in a unique position to capitalize on this growth, through its cooperative work with ORNL, and its investments in both engineering and computer science over the last several years,” Thomas commented. “Being able to understand the implications of computing in the arenas of energy and smarter infrastructure will serve the university well in the years to come. These are huge issues that affect global economies.”

Thomas is also encouraged by the increasing numbers of women who are becoming engineers.

“I believe that this is a great arena for women. Women are often more interested in the human element of their careers and engineering allows you to have a huge impact on people, either within the organization you choose to work or in organizations that you serve,” Thomas said.

Outside of work, Thomas enjoys spending time with her husband, Richard Thomas, and their two “furry children,” dog Morgan and cat Leo. The couple loves the outdoors, and has a vacation home near Asheville, North Carolina. They also spend time golfing and hiking in the beautiful national parks between North Carolina and Tennessee, and also like to travel and learn about different cultures across the globe.

Call 865-974-2779 or visit engr.utk.edu/give
The John D. Tickle Engineering Building

The tent was huge! Still, the crowd of around six hundred spilled out beyond to celebrate the dedication of the John D. Tickle Engineering Building — the largest attendance of a ribbon cutting that UT can remember. In a letter to students Ann Tickle expressed the significance of this event writing, “We are here today to dedicate a building, but the students and faculty are what bring life to a building. You [the students] are the inspiration for us to remain engaged and committed to the university.”

The Tickles’ gift and the building named for John have inspired others, evidenced with over twenty donors acknowledged for their major support in plaques throughout this building. Gift recognition opportunities are still available in this beautiful one hundred ten thousand square foot facility. For information about naming one of the other available rooms, please contact Dorothy Bryson.

The College Fund for Engineering

Together with seven individual department funds, annual giving to these discretionary gift accounts provides the impact of a $10 million endowment. Over $470,000 was given to these eight funds by approximately one thousand individuals last year. That sends a strong message of the power of our alumni when they come together to make a difference. “Not everyone can give millions or even thousands, but I challenge each UT engineering graduate to give something worthy of the students we serve and educate,” states Dean Wayne Davis.

These gifts are used to enhance laboratory renovations, assist with middle and high school engineering outreach programs, encourage faculty excellence, or purchase equipment for student labs and classrooms. Today’s fast-paced technology-rich engineering environment demands continual improvements if the college is to provide excellence in the classrooms and the labs.

The Gibson Endowed Chair in Engineering

A $1.5 million commitment from Jim Gibson (BS/IE ’71) has established the Gibson Endowed Chair in Engineering to focus on research pointed towards answers to the world’s tremendous energy challenge. “This gift allows us to leverage funding for engineering provided in Governor Bill Haslam’s budget in a powerful way. The Gibson Endowed Chair will complement and expand our already considerable scope of work in the energy disciplines,” explains Davis. With key faculty in multiple departments already working on leading-edge energy solutions, the Gibson Chair will be a senior-level professor who can augment current research collaborations and help the college create new clusters of strength. A national interdisciplinary search began fall 2013.

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“Over the past several years I have met some of UT’s incredible young graduate students and have seen their research presentations,” states Gibson. “Their enthusiasm and dedication gives me great hope for the future. They inspire me and my intent is to help the college bring in more great professors who will continue to inspire students.”

The Wayne T. Davis Endowed Dean’s Chair

Announced at the conclusion of the 175th Anniversary Celebration Gala, this new $3 million endowment is another fund that will enable UT’s current dean — for whom it is named — to propel the College of Engineering forward. It is in recognition of Davis’ extraordinary service and leadership that John and Ann Tickle, Chad and Ann Holliday, Joe and Judy Cook, and Eric and Elaine Zeanah came together to establish the Wayne T. Davis Endowed Dean of Engineering.

“An endowment that establishes a Dean’s Chair is tremendously important,” notes Dr. Susan Martin, who as provost is the university’s chief academic officer. “It is a visible affirmation of the importance of great leadership in the academic enterprise.”

The Davis endowment is specifically designated to be used by the dean to advance the educational mission of the college. We celebrate the impact of giving at every level because the difference it makes for engineering students is real.

For information about making an impact of your own contact:

Dorothy Barkley Bryson
Executive Director of Development • The University of Tennessee, Knoxville • College of Engineering
114 Perkins Hall • Knoxville, Tennessee 37996-2012 • dbryson@utk.edu • 865-974-2779
COE Student Named UT Torchbearer

The Chancellor’s Honors Banquet was held on April 8, 2013, and a College of Engineering student received one of the university’s highest honors.

Akshitha Yarabothula was named a Torchbearer. She is a chemical and biomolecular engineering major, a Haslam Scholar, Chancellor’s Scholar, and Baker Scholar. Her dedication to research earned her a position as an undergraduate research assistant conducting graduate-level research. Her accolades include selection as the engineering first place divisional winner of the 2011 EURECA competition and as UT’s representative for the first SEC Symposium. She has helped others through volunteering with the Boys and Girls Club of Greater Knoxville and in the emergency room at Fort Sanders Regional Medical Center, among other organizations. Yarabothula has led campus groups such as the Delta Phi Omega Sorority and the Society of Women Engineers. UT’s Department of Housing honored her as one of its most outstanding resident assistants.

The Torchbearer is the highest honor the university gives to its students. The Torchbearer is awarded to seniors who have served UT with overall excellence. Recognition as a Torchbearer reminds all students that those who bear the Torch of Enlightenment shadow themselves to give light to others.

On Monday, April 22, 2013, Robbie Nutt and Tony Chilcoat (BS/CompEngr ‘12, ‘12) hosted the Randall K. Nutt and Nutt Family Scholarship Barbeque at her beautiful lakeside home in Jefferson Park in Knoxville.

A past and current scholarship recipients were invited to her home. These two scholarships recognize the Nutt Family’s contributions to UT. The former is named in honor of Robbie Nutt’s late son, Randall, whom she was an engineering student at UT.

Additional hosts for the event included Robbie’s son, Robert Nutt (BS/EE ‘12), and her daughter, Rihonna Nutt Goble (BS/EE ‘13). The Dean of Engineering Wayne Davis, and his wife, Sylvia, attended along with a collection of past and current recipients.

Current recipients included Michael Parker (Nutt Family Scholarship), David Hart (Randall Nutt Scholarship, and Allison Davis (Randall Nutt Scholarship).

Past recipients who attended the event included Robert Burgin (BS/EE ‘09) and his wife, Morrie, Stephan Janssen (BS/NE ‘07, BS/ME ‘09) and his wife, Jessica, Matthew Laurence (BS/EE ‘17) and guest, Austin Womac (BS/EE ‘17), Taylor Morris (BS/CompEng ‘12), Daryl Raney (BS/NE ‘14, BS/COMP/NEE ‘17) and his wife, Rachael.

Guests enjoyed a catered dinner by Dead End BBQ (co-owned by Robert Nutt) and the opportunity to reconnect and personally thank the Nutt family for the impact the family’s gifts have had on so many undergraduate engineering students at UT.

Events & Awards

COE Donor and Alum Host Randall K. Nutt Scholarships and Nutt Family Scholarship Barbeque

Akhitha Yarabothula (left) receives a plaque designating her as a UT Torchbearer from Chancellor Jimmy G. Cheek (right) at the Chancellor’s Honors Banquet.

COE Dean Wayne Davis (far left), Director of Outreach Programs Roger Parsons (left) and Associate Dean for Academic and Student Affairs, Naveen Parang (far right) with the NAE Grand Challenges Scholars (left to right) Ethan Canizar, Kehlani Hasse, and Morgan Baltz at the college’s spring Board of Advisors meeting.

Three National Academy of Engineering (NAE) Grand Challenge Scholars were saluted at the College of Engineering’s spring board meeting and at the 2013 engineering commencement ceremony for completing additional challenging academic requirements as stipulated by NAE: Morgan Raney Baltz, a chemical engineering major, Ethan Zachariah Canizar, an aerospace engineering major, and Kehlani Elizabeth Hasse, a nuclear engineering major.

In 2008, the National Academy of Engineering identified fourteen Grand Challenges for engineering in the 21st century. These challenges represent each of the broad realms of human concern—sustainability, health, vulnerability, joy of living—specified by the NAE qualifications and response to an online poll sponsored by the organizations that received over twenty-five thousand votes over five months.

The NAE Grand Challenge Scholars Program is the companion program for engineering schools that have accepted the challenge of designing combined curricular and extra-curricular programs to prepare students to be the generation that solves the grand challenges facing society. In 2009, the University of Tennessee College of Engineering established an approved Grand Challenges Scholars Program. The college is one of only twelve engineering schools in the country to have this prestigious program.

For more information about the Grand Challenges Program, visit http://www.engineeringchallenges.org/cms/8996/9221/10474.aspx

NAE Grand Challenge Scholars Recognized

On Tuesday, April 16, Ken Huntsman (MS/CS ‘77), recipient of the UT Accomplished Alumni Award for 2013, presented Creating “the Internet on Training Wheels,” a special seminar for University of Tennessee faculty, staff, and students.

Huntsman also is a 1974 graduate of Penn State University with a BS in computer science. He then joined Telenet Corporation, of one of the first successful commercial e-mail systems. He then joined Control Video Corporation to work on downloading games to the Atari VCS in early 1980s. After leaving that organization, he joined several others in 1985 to co-found the company that eventually became America Online. He retired as an “AOL Fellow” from AOL in 2007.

Ken Huntsman

Help Support the IEEE Robotics Team

Go to www.volsconnect.com/impact to give today!
The University of Tennessee College of Engineering gave its most prestigious honor—the Nathan W. Dougherty Award—to industrial engineering graduate John D. Tickle at the college’s Annual Faculty and Staff Awards Dinner, held on Thursday, April 4, 2013, at the Crown Plaza.

Tickle, who earned the rank of Eagle Scout, received the Heroism Award from the National Court of Honor of the Boy Scouts of America in June 2012. He also recently received the 2013 ACMA Lifetime Achievement Award from the American Composites Manufacturers Association (ACMA), the composites industry’s largest trade group in the world.

Tickle and his wife, Ann Tickle, who graduated with a bachelor’s degree from the UT College of Education, are extensively involved in philanthropic work and are avid supporters of the university. He has been a member of the UT Athletic Board and has served on the College of Engineering’s Board of Advisors and is a member of the Campaign for Tennessee Engineering Executive Committee. Ann Tickle has been an active member of the Development Council and Alliance of Women Philanthropists. Mr. and Mrs. Tickle have been contributing to the university for over forty years. A gift from the Tickers established the John and Ann Tickle Small Animal Hospital expansion within UT’s College of Veterinary Medicine. The generosity allowed construction to begin forward the $10 million addition in 2007. The facility was opened in the spring of 2008.

Additional award recipients at the college’s Faculty and Staff Awards Dinner included:

- Outstanding Support Staff Award: Kristy Walker, business manager.
- Department of Industrial & Systems Engineering: and Angela Miller, administration/academic specialist, Engineering Advising Office.
- Outstanding Faculty Advisor Award: Dr. Roberto Benson, Department of Materials Science & Engineering.
- Dr. Moses E. and Myame Brooks Distinguished Professor Award: Dr. Lynne Parker, Department of Electrical Engineering & Computer Science.
- Leon and Nancy Cole Superior Teaching Award: Dr. Hahn Choo, Department of Materials Science & Engineering.
- Outstanding Support Staff Award to Angela Miller from the Engineering Advising Office.

COE Alumni Receive Recognition at the Alumni Board of Directors Awards Dinner
On Friday, September 27, the Alumni Board of Directors Awards Dinner was held at the Knoxville Convention Center. Two College of Engineering alumni received distinctive awards at the event.

Dr. David Icove, Department of Electrical Engineering & Computer Science, was named the College of Engineering Teaching Fellow Award. Dr. Lee Han, Department of Civil & Environmental Engineering, was named the College of Engineering Research Fellow Award.

Advisors, the UT Chancellor’s Associates and the UT Development Council, along with UT’s Institute for Public Service to assist county governments in the College of Engineering. They also created an endowment for the Knoxville News Sentinel Stennis Program, named for NASA astronaut James E. Stennis.

As a consultant to several congressional committees and the White House, Caldwell worked on a variety of issues including transportation, emergency management, and education. She also served as a member of the National Academy of Public Administration.

Kathy Caldwell, PhD
Kathy Caldwell received the Alumni Professional Achievement Award. Caldwell graduated from the University of Tennessee with high honors in civil engineering in 1981. Upon graduation, she worked as a structural designer with Lockwood Greene in Oak Ridge, Tennessee. She then worked as a consulting engineer in Austin, Texas, in 1987 and joined Parkhill Smith & Kilverter, a large consulting firm in Austin.

Dwight Kessel Girls Club Gymnasium, Dwight Kessel Pavilion, and the US Naval Academy, was working for the US Department of the Navy. In 1972, he co-founded a small, family-owned construction company–US Internet Investments; the conversion of the Farragut Hotel into office space; the creation of the Piney Woods Mall; the construction of a large retail project; and the creation of a large retail project.

Due to his commitment to the Knoxville community, several major developments in the city have been named in his honor, including the UT’s Institute for Public Service, the Knoxville News Sentinel Stennis Program, and the UT’s Dwight Kessel Girls Club Gymnasium.

Kathy Caldwell retired from her position at JEA in 2010 after working for thirty years with the firm. She served as a project manager and executive consultant on a variety of projects, including the development of the new UT Hospital in Knoxville.

Kathleen Caldwell, a native of Knoxville, graduated from the University of Tennessee in 1981 with a degree in civil engineering. She began her career as a consultant with the Tennessee Department of Transportation in 1981 and later joined the consulting firm of Turner.Young & Associates in Knoxville, where she enjoyed a successful career in the field.

Caldwell has been a member of the West Knoxville Kiwanis Club for sixty years. She has also been a member of the Kiwanis Club of Knoxville for twenty-five years.

Her community involvement goes far beyond political positions, as she has served on various boards and committees in the Knoxville area. She has served as a member of the Board of Directors for Engineers Without Borders (EWB) and the American Society of Civil Engineers (ASCE) in the Knoxville area. She has also served on the boards of Engineers Without Borders (EWB) and the American Society of Civil Engineers (ASCE) in the Knoxville area.

Kathleen Caldwell is a long-time, passionate advocate for engineers and the profession. She has served as a member of the ASCE’s Tennessee section and is a former president of the Tennessee Section. She has also served on the boards of Engineers Without Borders (EWB) and the American Society of Civil Engineers (ASCE) in the Knoxville area. She has also served as a member of the Knoxville News Sentinel Stennis Program and the UT’s Dwight Kessel Girls Club Gymnasium.

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Edwin McDougle (BS/CE '69, MS/CE '73), a former chairman of the College of Engineering’s Board of Advisors, was named Outstanding Engineer of the Year by the Nashville/Middle Tennessee Section of the American Institute of Engineers. McDougle is the founder of McDougle Engineering.

H.M. Hashemian (MS/NE '70), president and CEO of Aker Kvaerner North America Corporation (AMS) in Knoxville, has been selected by the U.S. Small Business Administration in Washington, D.C., as the 2013 Tennessee Small Business Person of the Year. The SBA honors Hashemian’s achievements and role in Tennessee’s economic growth, particularly for his hard work, innovative ideas, and dedication to the business and academic community.

James M. “Mike” Holmes (BS/EE '87) was promoted to Lieutenant General on August 2, 2013. He now serves as Vice Commander, Air Education and Training Command, Joint Base San Antonio-Randolph, Texas. In his previous rank as Major General he most recently served as Assistant Deputy Chief of Staff for Operations, Plans and Requirements, Headquarters, US Air Force, Washington, DC.

James Conwell (BS/ME '82, MS/ME '86) was named president of the Board of Trustees at Rose-Hulman Institute of Technology in Terre Haute, Indiana, and began serving on May 3, 2013. He is the institute’s fifteenth president. Before taking this position, Conwell served as vice president of the Jacobs Engineering Group, a Fortune 500 Company, where he led his group to record revenue and performance for the past five years. In addition to his successful and progressive leadership, Conwell also includes teaching undergraduate engineering at Vanderbilt University in Nashville, Tennessee; Louisiana State University; and Grove City College in Pennsylvania. Founded in 1874, the Rose-Hulman Institute is an engineering college with 1,900 undergraduate students and one hundred graduate students.

David Harrell (BS/EE '81, MS/EE '89, PhD '95) has been appointed manager of the Advanced Engineering Group, ENVIRON International Corporation in Brentwood, Tennessee. Dr. Harrell received a B.S. from Auburn University in 1977, an M.S. from the University of Alabama in Huntsville in 1981, and a Ph.D. from Duke University in 1995. He has over 30 years of experience in the areas of environmental, health, and safety engineering.

Memorials

Bob Yates (BS/EE '49) died on June 8, 2013. He was a resident of Old Hickory, Tennessee.

Lester Epel (MS/ME '58) died on August 21, 2010. He was a resident of Scottsdale, Arizona.

Lewis Evans Sr. (BS/CE '54) died on March 31, 2013. He was a resident of Nashville.

Charles Fisher (PhD/ME '59) died on July 13, 2010. He was a resident of Nashville, Tennessee.

John Andrew French (BS/EE '50) died on June 25, 2011. He was a resident of Huntsville, Alabama.

Frank Hudson Fuller Sr. (BS/ME '50) died on June 15, 2013. He was a resident of Wilmington, Delaware.

Travis O. Fullwood (BS/EE '55) died on May 24, 2012. He was a resident of Selmer, Tennessee.

Richard Henritz (BS/ME '55) died on April 13, 2012. He was a resident of Huntsville, Alabama.

Robert Edward Hickey (BS/EE '58) died on October 24, 2011. He was a resident of Bremen, Texas.

James Wallace Hooker (BS/EE '62) died on July 31, 2012. He was a resident of Nashville, Tennessee.

Paul Jackson (BS/CE '94) died on May 30, 2013. He was a resident of Evans, Georgia.

Wesley “Wes” Martin Johnson (BS/EE '65) died on June 24, 2013. He was a resident of Kingston, Tennessee.

Robert Adam Ksamer (BS/CS '99) died on October 5, 2012. He was a resident of Beaumont, Texas.

Jesse Kenneth Langley (BS/CE '56) died on September 30, 2012. He was a resident of Portland, Oregon.

James Leonard MacAdams (BS/EE '42) died on May 10, 2013. He was a resident of Santa Fe, New Mexico.

Harold Curtis McCurdy (BS/CE '43) died on June 28, 2013. He was a resident of Oak Ridge, Tennessee.

John L. Neely III (BS/EE '53, MS/EE '68) died on December 6, 2011. He was a resident of Knoxville, Tennessee.

Hal Carter Nichols Jr. (BS/EE '49) died on October 5, 2012. He was a resident of Knoxville.

John F. Phillips (BS/EE '50) died on July 28, 2012. He was a resident of Jackson, Tennessee.

Richard B. ‘Dick’ Pruitt (BS/EE '55) died on May 16, 2013. He was a resident of Middletown, Ohio.

James Herbert Stedman (BS/EE '49) died on May 24, 2013. He was a resident of Nashville, Tennessee.

Edward Arnold Townsend (BS/EE '68) died on April 27, 2013. He was a resident of Paris, Tennessee.

James Hugh Valentine (BS/ME '56) died on March 14, 2013. He was a resident of Huntsville, Alabama.

Rex Ray Walker (BS/EE '62) died on May 5, 2013. He was a resident of Davie, Florida.

John Morgan Wininger (BS/ME '59) died on July 14, 2013. He was a resident of Blountville, Tennessee.

Bob Yates (BS/EE '60) died on July 8, 2013. He was a resident of Huntsville, Alabama.
College of Engineering
Homecoming 2013

Save the Date
College of Engineering Alumni BBQ
On the Hill

The University of Tennessee College of Engineering invites you to Homecoming 2013 and the Annual Alumni Barbeque on the Hill.

Saturday, November 9, 2013
Three hours prior to kickoff of the Tennessee vs. Auburn game.

Join us for a barbeque lunch, including hot dogs for the kids.

Enjoy exhibits and demonstrations, reunions with former classmates and faculty, and games for both adults and children.

Register today and be a part of the tradition.

Costs:
$12.00/adults - $8.00/children under ten years of age

Register online at: www.volsconnect.com

For more information, contact Christina Parsons at (865) 974-2779 or e-mail engrdev@utk.edu.

The University of Tennessee is an EEO/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.


Calendar

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