

THE MAGAZINE OF THE UNIVERSITY OF KENTUCKY COLLEGE OF ENGINEERING

KENTUCKY ENGINEERING JOURNAL

Spring 2015

150
YEARS
1865 - 2015

Time & Tradition

UK celebrates 150 years
of engineering excellence

Mechanical engineering

junior Luke South excels not only as a member of the perennially ranked UK Men's Rifle team, he shines in the classroom as well. During the team's 2014 season that culminated in a third place finish at the NCAA Rifle Championships, he was named to the Winter 2013-2014 SEC Academic Honor Roll. A Mississippi native, Luke certainly has athletic and academic success in his sights.





Message from the Dean

Welcome to the Spring 2015 issue of *Kentucky Engineering Journal*. It took longer than normal, but we finally emerged from a winter that will be remembered around here for historic snow and cold that led to six days of class cancellations. Needless to say, we are glad to leave winter behind and we hope our new issue finds you enjoying the warmth and freshness of spring.

In February, the University of Kentucky celebrated its 150th anniversary. Since the university began with course offerings in agriculture and mechanical arts (engineering), the College of Engineering traces its inception to UK's creation in 1865. In this issue, we review the past 150 years with help from former dean and unofficial college historian, Tom Lester. When you have finished that long walk down memory lane, learn about the groundbreaking research occurring within our Institute for Sustainable Manufacturing and read our interview with National Academy of Engineering member, Hall of Distinction member and civil engineering alumnus Dr. Paul Boulos. Other feature articles in this issue highlight incomparably talented chemical engineering freshman Szofia Komaromy-Hiller and alumni and scholarship founders John and Karen Maxwell. Finally, we will introduce you to two computer science professors who specialize in a form of dancing most appropriate for time spent "Out of the Lab."

We are proud of our flagship publication. Recently, *Kentucky Engineering Journal* received five first-place awards at a competition involving universities and colleges throughout the state and earned a second-place award for magazine improvement at a regional gathering of southeastern institutions. The awards encourage us to keep challenging ourselves and never rest on our previous accomplishments. If you have feedback for us, please don't hesitate to contact us at alumni@engr.uky.edu.

Sincerely,

John Y. Walz
Dean

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FRONT COVER

2015 marks the 150-year anniversary of the founding of the University of Kentucky. We are proud to celebrate our legacy of producing world-class engineers.

UNIVERSITY OF
KENTUCKY
College of Engineering



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Dicker Hall - University of Kentucky
 At last our ambitious relative to a haven of rest, study and relaxation for the students of the College of Engineering of the University of Kentucky have been realized. This room is a fitting memorial to Joseph Dicker — for twenty six years the philosopher of Mechanical Hall. Hundreds of students were influenced for good by this man's wisdom and counsel. This club room with its rosy fire place and its cozy and inviting settings welcomes each and every one who has been at any time a member of the University of Kentucky family. It is a place to renew and to create friendships. We are very happy it is a reality.
Paul Anderson
 December 1929



*The fireplace in Dicker Hall invites you
 with high companionship of books
 or slippered talk of friends*



150 YEARS

1865 - 2015

A RETROSPECTIVE

On February 22, 1865, with the last shot of the Civil War yet to be fired, the Kentucky legislature accepted the provisions of the Morrill Land-Grant College Act, thus giving birth to what is now the University of Kentucky. Deemed the "Agricultural and Mechanical College of Kentucky," the institution officially opened its doors in October 1866. The mechanical department offered courses in civil engineering and mining at Henry Clay's former mansion and farm, "Ashland," and in 1868, "A&M College," as it was called, constructed its first building—the "Ashland Mechanical Works." Tuition was \$30 per year, accompanied by a \$5 janitor's fee.

Initially an independent state institution that operated within Kentucky University (itself having recently combined with Transylvania University), the Kentucky legislature removed A&M College from Kentucky University in 1878. Two years later, the city of Lexington donated the old fair grounds on South Limestone—52 acres in all—for A&M College's next home. One hundred and thirty-five years later, the present-day University of Kentucky remains in that location and the UK College of Engineering still trains aspiring world-changers in crucial engineering fields. In this article, which is not meant to be an exhaustive or chronological history, we would like to identify some of the important people, programs and places that have allowed the college to not simply survive, but thrive in a competitive educational arena.

Along the way, Thomas W. Lester, former dean and faculty member since 1990 and passionate historian of the college, will supply insightful and sometimes surprising commentary. After 25 years in the college, Lester will retire at the semester's end.

Science or Bachelor of Arts; however, students could not earn a bachelor's degree specifically in engineering. That changed in 1886 when the school offered an engineering course that led to the degree of Civil Engineer (C.E.). John Wesley Gunn was the first student to earn this degree—and thus a degree from the College of Engineering—in 1890.

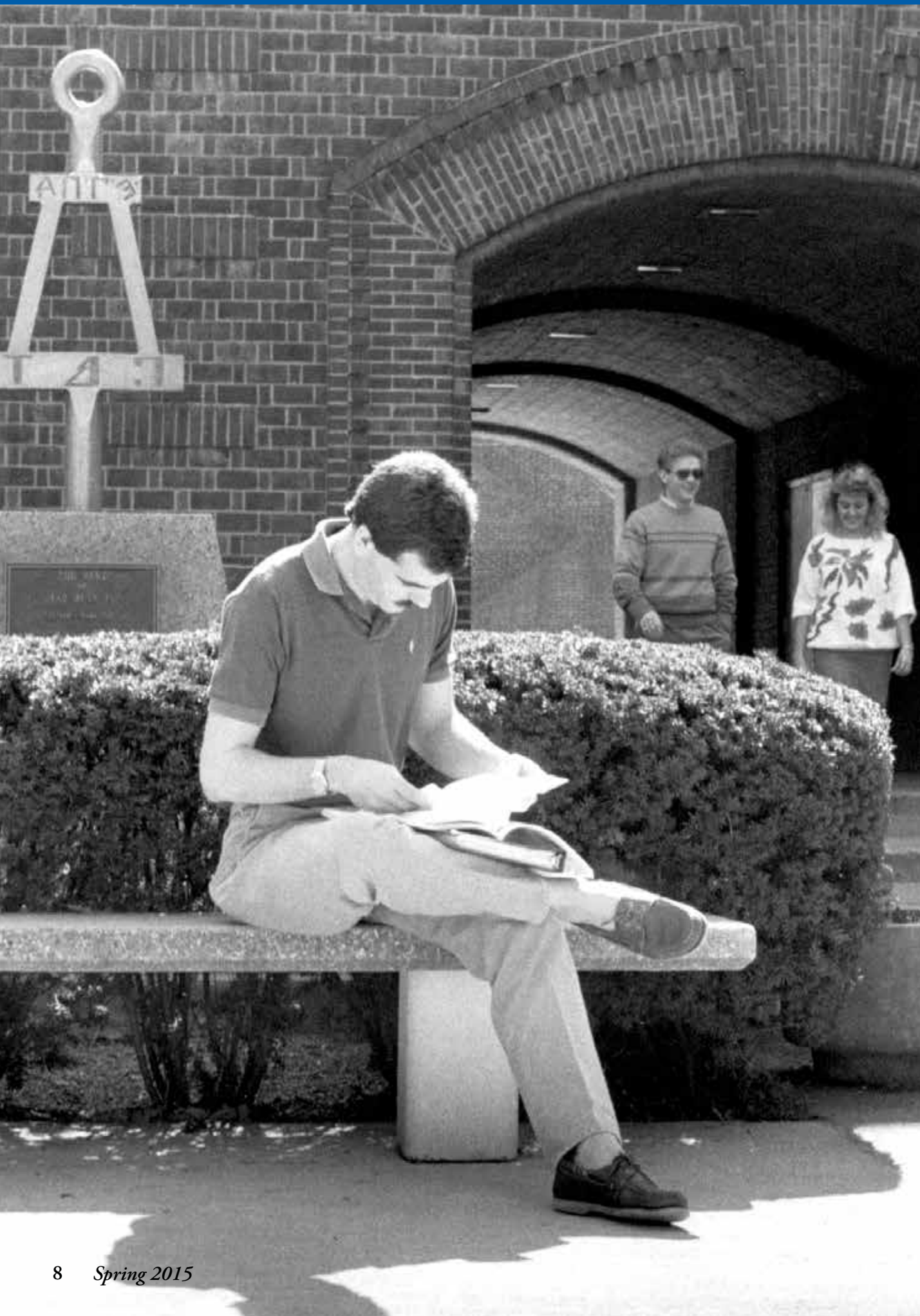
Thomas W. Lester (TWL): While John Wesley Gunn was the first student to obtain an engineering degree, William Benjamin Munson—A&M College's first graduate (1869)—came to Kentucky to study engineering and would have earned an engineering degree if such a thing had been available. Munson was a sharp entrepreneur and his engineering background enabled him to become a prosperous proprietor and developer. He put the town of Denison, Texas on the map by organizing a railroad line, founding a cotton mill, a bank and a power company. Eventually, Munson owned ten million acres of Texas land.

ALUMNI SUCCESS

Since John Wesley Gunn graduated in 1890, over 24,000 individuals have received at least one degree in engineering or computer science from UK. Our alumni

ENGINEERING AT THE FOREFRONT

For the first 20 years of its existence, A&M College taught courses leading to the degrees of Bachelor of



feature leaders in politics, energy, transportation, manufacturing, medicine, aerospace, education and more. Seven alumni have been inducted into the National Academy of Engineering. In 1992, the college created the Hall of Distinction, which recognizes alumni who have demonstrated distinguished professional accomplishments, outstanding character and commitment to community service. The rows of plaques bearing the engraved visages of Hall of Distinction members along the atrium of the Ralph G. Anderson Building encourage current students who understand that those in the hall once sat in the same seats they now occupy.

TWL: *One of the most significant attributes of our graduates has been their enthusiasm for, and their support of, the greater university. As a consequence, nine buildings on campus owe their existence to the philanthropic contributions of our alumni and several others have been named in honor of graduates and faculty of the College of Engineering.*

ENGINEERING EDUCATION FOR A CHANGING WORLD

At the beginning of the twentieth century, A&M College offered bachelor degrees in three different disciplines: mechanical engineering, civil engineering and mining engineering. The Department of Electrical Engineering was established in 1918 and became the Department of Electrical and Computer Engineering when a computer engineering degree option was added in 2005. The Department of Biosystems and Agricultural Engineering and the Department of Chemical Engineering were created in 1956, with materials engineering added to the latter in 1997. The Department of Computer Science, which had resided in the College of Arts & Sciences as an outgrowth of mathematics studies, moved into the College of Engineering in 1994. The Center for Biomedical Engineering moved into the college in 2010 after over 30 years as an offering through The Graduate School and became an official department in 2013. In 1953, Carl J. McHargue received the first doctor of engineering degree; however, the college sorely needed to increase the number of its faculty with doctoral degrees in order to strengthen its graduate studies.

TWL: *The arrival of John Oswald as the university's seventh*

president in 1963 marked the beginning of a five-year period of enormous growth and vitality for the university's academic offerings, especially its advanced degrees. Alumnus Robert M. Drake was recruited to the university from Princeton University by Oswald and became the college's fifth dean in 1966. I view Dean Drake as the founder of the modern College of Engineering. He recruited a new cohort of faculty, many from Ivy League schools, who became the leaders in the development of a full complement of doctoral degree programs within the college.

STRIVING TO BE AN INCLUSIVE COLLEGE

Margaret Ingels became the first woman to receive an engineering degree from the college when she earned her bachelor's degree in mechanical engineering in 1916 (additionally, she became the second female engineering graduate and the first female to earn a graduate degree in engineering in the United States). Ingels worked in air conditioning at Carrier Corporation, became a spokesperson for the engineering profession and was an inspiration to women interested in engineering. Miss Ingels was posthumously inducted into the College of Engineering's Hall of Distinction in 1993.

In 1951, Holloway Fields, Jr., became the first African-American student to receive an undergraduate degree at the University of Kentucky when he earned a bachelor's degree in electrical engineering. Fields enjoyed a long, productive career with General Electric and was inducted into the Hall of Distinction in 1998.

TWL: *Not only is the current freshman class the largest and among the top three academically in the college's history, it is also the most diverse with 19% female students and 21% minority students. The collegiate chapters of the Society of Women Engineers and the National Society of Black Engineers provide both cultural and intellectual support for their student members and render important service to the entire college. Both have received national acclaim for their accomplishments. There has been a corresponding increase in the diversity of the faculty as well. Although the college has made gains, it continues to explore ways to serve underrepresented populations, as well as make them part of our faculty.*

THE COLLEGE’S LEADERS AND THEIR IMPACT

In 1891, a Purdue University graduate named F. Paul Anderson arrived at A&M College to teach mechanical engineering and establish mechanical engineering as a department. After making mechanical engineering one of the top departments in the whole institution, Anderson became the College of Engineering’s first dean in 1918 and served until his death in 1934. The next three deans, James H. Graham (11 years), D.V. Terrell (11 years) and Robert E. Shaver (nine years), gave the college stability over the next 30+ years, which allowed it to flourish through its 100th year. Robert Drake became dean in 1966, a position he held until he was appointed vice president of the University of Kentucky in 1972, at which time James E. Funk took over as dean. He served until 1979 and Roger Eichhorn and Ray Bowen held the post in turn through 1989.

In 1990, another Purdue mechanical engineering graduate, Thomas W. Lester, who had taught at Kansas State University and Louisiana State University, became dean of the college. Lester holds the longest tenure as dean of engineering in UK’s history, serving for 22 years. His influence and accomplishments were profound. The physical plant was modernized and expanded through the completion of a number of research and educational buildings under his watch, and access to the college’s degree programs was extended to western Kentucky with the creation of the University of Kentucky College of Engineering Extended Campus Program in Paducah—a site that allows students to complete a four-year mechanical or chemical engineering degree exclusively in Paducah. In addition, Dean Lester pioneered a program that offers automatic scholarships to students who meet the college’s demanding criteria.

After Dean Lester returned to the mechanical engineering faculty on a full-time basis in 2012, John Y. Walz, former chemical engineering department head at Virginia Tech and erstwhile professor at Yale University and Tulane University, accepted the college’s offer to become the next dean. Dean Walz has made the recognition of the college as one of the top 50 in the country a centerpiece of his agenda. He has worked vigorously to galvanize the support of engineering graduates, partner corporations and foundations in support of this quest. **KEJ**

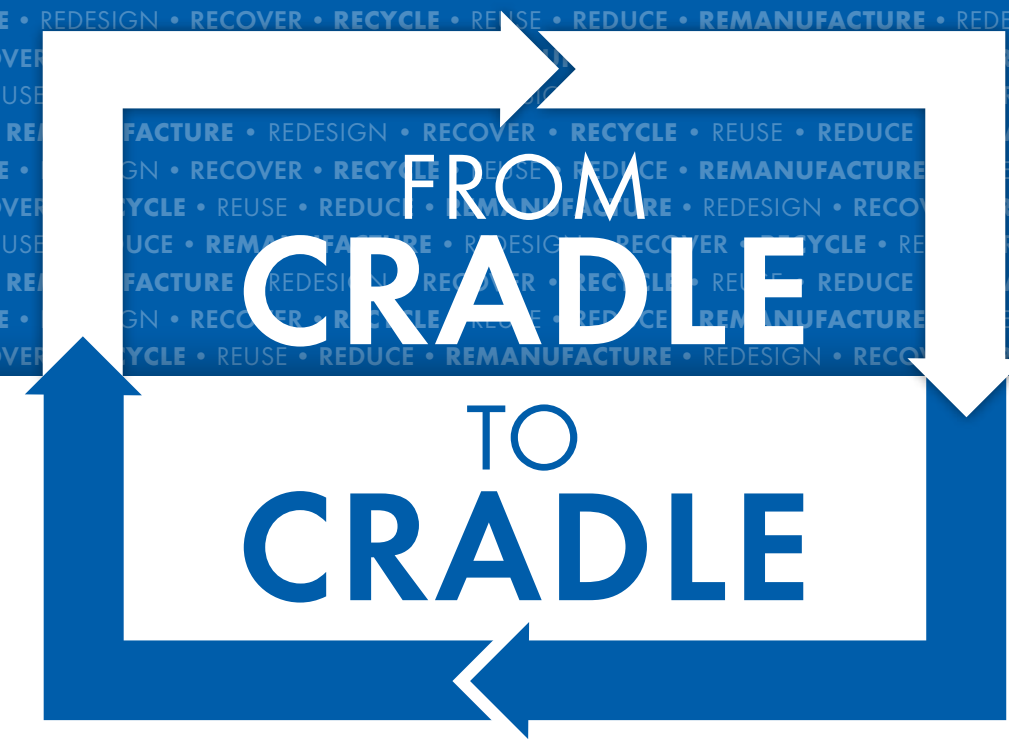
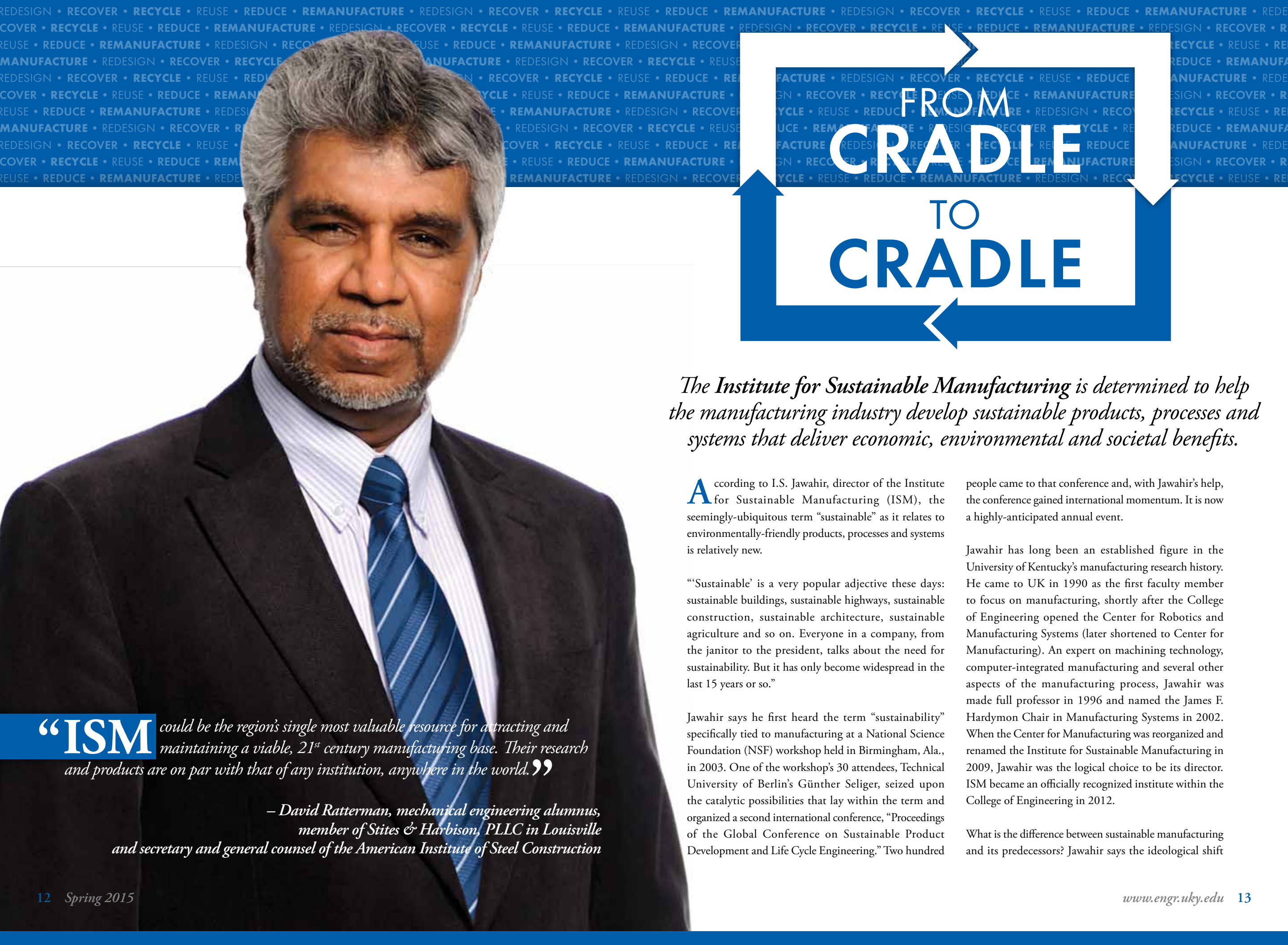


Buildings Made Possible by the Philanthropic Contributions of Engineering Alumni

BUILDING	ALUMNUS
Ralph G. Anderson Building	Ralph G. Anderson, Mechanical 1950
James F. Hardymon Building	James F. Hardymon, Civil 1956 1958
Davis Marksbury Building	Davis L. Marksbury, Civil 1980
Nutter Field House	Ervin J. Nutter, Mechanical 1943
Nutter Football Training Facility	Ervin J. Nutter, Mechanical 1943
Oliver H. Raymond Building	Oliver H. Raymond, Civil 1954
James W. Stuckert Career Center	James W. Stuckert, Mechanical 1960
S.J. “Sam” Whalen Building	S.J. “Sam” Whalen, Metallurgical 1949
William T. Young Library	William T. Young, Mechanical 1939

Buildings Named in Honor of Engineering Faculty and Alumni

BUILDING	HONOREE
F. Paul Anderson Tower	F. Paul Anderson, first dean of the college, 1918-1934
Ingels Hall	Margaret Ingels, first female graduate from the college, 1916 and 1920
D.V. Terrell Building	D.V. Terrell, dean and civil engineering chair, 1946-1957



The Institute for Sustainable Manufacturing is determined to help the manufacturing industry develop sustainable products, processes and systems that deliver economic, environmental and societal benefits.

According to I.S. Jawahir, director of the Institute for Sustainable Manufacturing (ISM), the seemingly-ubiquitous term “sustainable” as it relates to environmentally-friendly products, processes and systems is relatively new.

“‘Sustainable’ is a very popular adjective these days: sustainable buildings, sustainable highways, sustainable construction, sustainable architecture, sustainable agriculture and so on. Everyone in a company, from the janitor to the president, talks about the need for sustainability. But it has only become widespread in the last 15 years or so.”

Jawahir says he first heard the term “sustainability” specifically tied to manufacturing at a National Science Foundation (NSF) workshop held in Birmingham, Ala., in 2003. One of the workshop’s 30 attendees, Technical University of Berlin’s Günther Seliger, seized upon the catalytic possibilities that lay within the term and organized a second international conference, “Proceedings of the Global Conference on Sustainable Product Development and Life Cycle Engineering.” Two hundred

people came to that conference and, with Jawahir’s help, the conference gained international momentum. It is now a highly-anticipated annual event.

Jawahir has long been an established figure in the University of Kentucky’s manufacturing research history. He came to UK in 1990 as the first faculty member to focus on manufacturing, shortly after the College of Engineering opened the Center for Robotics and Manufacturing Systems (later shortened to Center for Manufacturing). An expert on machining technology, computer-integrated manufacturing and several other aspects of the manufacturing process, Jawahir was made full professor in 1996 and named the James F. Hardymon Chair in Manufacturing Systems in 2002. When the Center for Manufacturing was reorganized and renamed the Institute for Sustainable Manufacturing in 2009, Jawahir was the logical choice to be its director. ISM became an officially recognized institute within the College of Engineering in 2012.

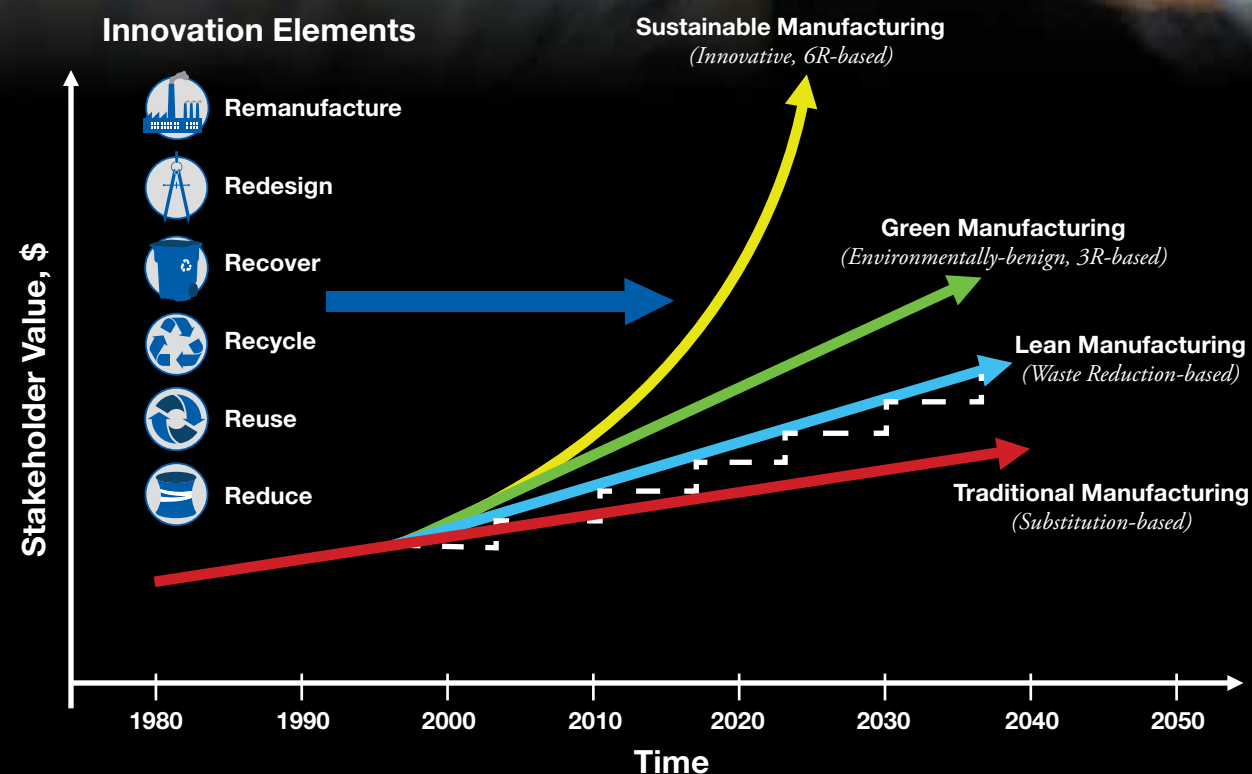
What is the difference between sustainable manufacturing and its predecessors? Jawahir says the ideological shift

“ISM *could be the region’s single most valuable resource for attracting and maintaining a viable, 21st century manufacturing base. Their research and products are on par with that of any institution, anywhere in the world.”*

– David Ratterman, mechanical engineering alumnus, member of Stites & Harbison, PLLC in Louisville and secretary and general counsel of the American Institute of Steel Construction



A graduate student conducts robotic welding research in the lab of electrical engineering professor and ISM faculty member YuMing Zhang.



Projected exponential growth in sustainable manufacturing (Jawahir and Dillon, 2007)

involves studying a product's entire life-cycle as a closed-loop system; instead of placing the emphasis upon reducing, reusing and recycling products (the basis for "green manufacturing"), sustainable manufacturing research identifies ways to redesign next generation products that can be remanufactured with recovered original materials—effectively closing the loop. Instead of a "cradle-to-grave" product life-cycle, sustainable manufacturing explores a "cradle-to-cradle" circuit. Jawahir calls this the "6R" concept. He introduced the powerful concept in 2006 and it is now widely accepted by experts in the field.

"In Europe, mostly in Germany, due to the End of Life Vehicles Directive, when a car is at the end of its life it doesn't go to a junkyard like it often does here in the U.S. Instead, the manufacturer of the car has to take it back. When the used cars start coming back to the manufacturers, sustainable manufacturing becomes more than an ideal!" he adds.

Seven full-time faculty members in the college are committed to ISM, as well as several affiliate faculty members and faculty from the Gatton College of Business and Economics, School of Architecture, Department of Chemistry and Center for Applied Energy Research. All possess excellent credentials. ISM also benefits from over 50 graduate students and postdoctoral researchers and visiting professors who have come from all over the world.

The interdisciplinary nature of the team allows ISM to investigate diverse research areas. Jawahir is the PI for a \$500,000 National Institute of Standards and Technology project designed to chart a course for sustainable manufacturing's future called PRISM (Partnership for Research and Innovation in Sustainable Manufacturing). Jawahir and Department of Biomedical Engineering chair David Puleo received \$300,000 from the NSF for a biomaterials project and Frank J. Derbyshire Professor of Materials Science Y.T. Cheng is co-PI of a project team that secured \$20 million in funding from the NSF for a project called "Powering the Kentucky Bio-economy for a Sustainable Future."

ISM's research, however, is not entirely academic. Through partnerships with Toyota, GE and locally-based Lexmark

International, ISM has developed case studies that show sustainable manufacturing principles and practices work.

"Universities are great centers of knowledge, but in our changing world we cannot lose sight of industry needs," Jawahir explains. "Manufacturing companies bear a lot of responsibility. When the country isn't doing well economically, the assumption is that manufacturers are doing something bad. So we take seriously the need to work with manufacturers."

One way ISM connects with both academia and industry is through their activities. Since 2011, ISM has held an annual International Forum on Sustainable Manufacturing that is open to academics and manufacturing professionals alike. In September 2014, 77 of the 114 participants who attended were from industry. Some of the highlights included a national-level panel discussion with the top leaders of three Department of Defense-led Institutes for Manufacturing Innovation and an "Emerging Researcher Showcase" that brought together young faculty from across the country to share cutting-edge research each is conducting in sustainable manufacturing and related areas. According to forum chair and mechanical engineering professor Fazleena Badurdeen, it was the best forum to date.

Badurdeen also directs the college's first completely-online degree—a master's in manufacturing systems that operates in conjunction with ISM and gives busy industry professionals an opportunity to grow in their knowledge and skills with minimal disruption. Encouraged by the interest, ISM hopes to offer an online Ph.D. in the future. ISM also houses the editorial offices of two leading international academic journals: *Machining Science Technology* and *International Journal of Sustainable Manufacturing*.

Citizens around the globe are increasingly aware that many of our modern ways of life cannot be continued without detrimental and perhaps irreversible repercussions. Whereas sustainable products, processes and systems were once viewed as interesting or even important, they are now imperative. As Jawahir puts it, the world has reached perhaps its largest tipping point.

"Sustainable development is no longer a choice. It is a necessity." **KEJ**



CENTER STAGE

*Singletary Scholar Szofia Komaromy-Hiller
is the antithesis of every engineering
stereotype you have ever heard.*

Szofia Komaromy-Hiller, in addition to having a name that is delightfully fun to say, is a 19-year-old package of artistic zest and cultured wisdom. How many other college freshmen do you know who has/is:

- Won 11 national writing awards
- Taken part in the Scripps National Spelling Bee
- Fluent in Hungarian and Spanish
- Traveled extensively in Europe and South America
- Written plays and pieces of historical fiction about historical figures...for fun
- A love for public speaking

She plays 11 instruments! Can you even *name* 11 instruments?

So why is this writer, musician and orator studying chemical engineering in the College of Engineering instead of endearing herself to professors and fellow students in the College of Arts & Sciences?

"I love writing lab reports," she insists, aware that such an admission is not considered normal. "I am passionate about the role of numbers in communicating discoveries. Lab reports appeal to my inner scientist and trigger in me a desire to share with others my findings through writing."



As a young girl living in Los Angeles, Szofia's father—a chemist and longtime lab denizen—would take her and her brother to the botanical gardens in Pasadena. Upon noticing the buildings on the California Institute of Technology (Caltech) campus, she inquired what went on there. Her father explained that it was a school for scientists who wanted to become engineers. At that exact moment, Szofia determined her future: she would go to Caltech, spend lunches eating sandwiches in the botanical gardens every day and graduate as an engineer.

It didn't quite work out like that (Caltech wasn't among the 15 universities to which Szofia applied during her senior year of high school), but she did maintain her interest in engineering. Then again, Szofia seems genuinely interested in almost everything.

"I am a visual learner, so figuring out a page of music was a fascinating challenge," she says, describing how she became enthralled with music. "Also, there is math connected with musical notation so I found that even more intriguing."

While she plays the piano, flute, saxophone, trombone, guitar, ukulele, trumpet, oboe, drums and organ, Szofia says her favorite instrument is the diminutive piccolo.

"Everybody respects the piccolo; it is the smallest instrument, but also the only one that can be heard through a giant crowd of cheering fans. When the band director realized I played the piccolo, my life as the boss of the marching band began. It is sheer musical power."

In a way, Szofia's writing functions as an outlet for her immense attraction to U.S. history. In 2012, she wrote a piece titled "In that Case, I'll Stick to Politics," penned from the viewpoint of Thomas Jefferson, and submitted it to the Scholastic Art and Writing Awards program in the "Humor" category. Amid the 250,000 entries, Szofia's earned her a trip to attend the awards ceremony at Carnegie Hall in New York City. While the judges doled out approximately 1,000 medals, only Szofia's entry received medals in three categories: Scholastic National Gold Medal, National Best-in-Grade Medal and the American Voices Medal. As a bonus, she met actress Meryl Streep.

Diverse experiences have always been structurally built into Szofia's education. Her father, who is from Hungary, and her mother, who is from Ecuador, both have Ph.D.s. In addition to traditional academics, Szofia's parents have sought to broaden her and her brother's understanding of the world through international travel.

"While we visit the typical tourist attractions, we also like to experience new places as the local residents do," she explains. "My parents wanted my brother and me to be environmental learners—to experience the world as it is."

It is possible Szofia does not have a so-called "comfort zone." She enjoys public speaking and is "very comfortable with people hanging on every word I say." She hopes to one day use her communication skills to inspire girls to pursue an engineering education.

When it came time to apply to college herself, Szofia, living in the northern Kentucky city of Edgewood, applied to 15 schools. She was offered considerable financial packages, but settled on a university in Boston that offered her its top scholarship (a six-month stint researching astrophysics at MIT had given her a love for the city). However, the more she talked with faculty and staff members at UK—who had offered her a Singletary Scholarship—the more she realized that the culture at UK might be more amenable to her success.

"UK struck me as a place that does not shape its students as individualists because the community is about taking care of each other and celebrating each other as one big blue nation," she reflects. "The people I met at UK were the best I dealt with throughout my search for the right engineering setting to shape my professional aspirations. Of all the high-caliber institutions I considered nationwide, UK was the most supportive."

Thankfully, Szofia is with us for a few more years. In the meantime, award presenters will want to become familiar with how to say her name, since she has a history of garnering accolades and honors. While she may not be in the UK marching band, as a student, communicator, artist and ambassador for the college, she certainly wields the charm—and power—of the piccolo. **KEJ**



LIQUID ASSET

An interview with civil engineering alumnus and National Academy of Engineering member Paul F. Boulos.

When Paul Boulos graduated with a Bachelor of Science in General Science from the Lebanese American University (LAU) in Beirut, he wanted his next educational step to take him to the United States. But where? Thankfully, Paul already had a stateside connection as a cousin of his was studying civil engineering at the University of Kentucky. He encouraged Paul to come to Lexington and Paul made the move. He would receive bachelor's, master's and doctoral degrees in civil engineering from UK.

Today, Dr. Paul Boulos is the founder of Innovyze, a leading global provider of wet infrastructure business analytics software solutions designed to meet the needs of water and wastewater utilities, river authorities, government agencies and engineering organizations worldwide. A global authority on water resources and navigation engineering, Dr. Boulos has written nine books and over 100 articles directed toward the goal of making a better world through better water. In 2009, he was awarded an Ellis Island Medal of Honor—a recognition given annually to American citizens who have “distinguished themselves within their own ethnic groups while exemplifying the values of the American way of life,” according to the National Ethnic Coalition of Organizations that operates the awards program. In 2010, he was inducted into the UK College of Engineering Hall of Distinction and in 2014, his dedication and accomplishments were rewarded with his induction into the National Academy of Engineering.

We spoke with Dr. Boulos about his career, research focus, awards, time at UK and more.

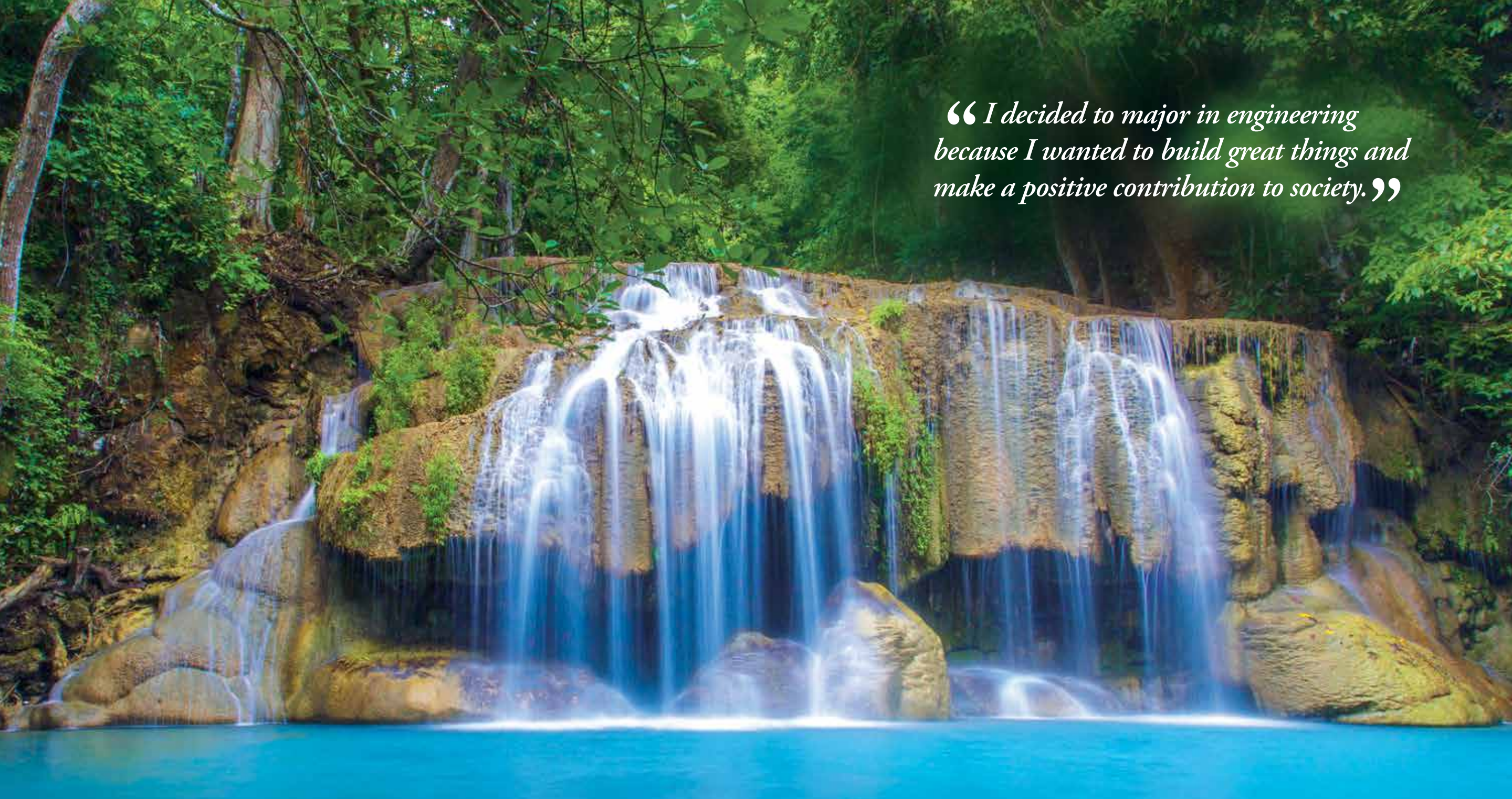
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What do you wish the public knew about drinking water/wastewater that they don't know or don't really understand?

PFB: Water affects all facets of life and yet we take it for granted. People are just beginning to realize how critical water is for sustainable development and how crucial it is to effectively manage this precious resource. With climate change shifting water patterns everywhere, the availability or lack of water can support or threaten our global economy. Innovative solutions in water resources efficiency will be desperately needed. Change is inevitable, and each one of us can play an important role in sustaining our world. The personal involvement of each one of us is critical.

We have seven UK engineering alumni in the National

Academy of Engineering and you are one of them. It is the highest professional distinction an engineer can receive. I know you were only inducted one year ago, but have you been able to put it in perspective?

PFB: Simply being a member of the engineering profession has always been one of the greatest rewards of my life. Receiving this honor was gratifying, extremely humbling and something I'll treasure forever. It's truly a privilege to receive such special recognition for doing something I deeply love and enjoy—especially when it comes from the men and women I most admire. Recently, I was appointed to the advisory group of the NAE Center for Engineering, Ethics & Society as well as a member of the NAE civil engineering peer committee. I look forward to working with this group to advance the practice of ethical engineering in the face of rapidly shifting changes



“I decided to major in engineering because I wanted to build great things and make a positive contribution to society.”

in environmental, technological and design policy.

You received all three of your engineering degrees at UK and then taught here for three years. How do you remember it? Do you ever come back?

PFB: I decided to major in engineering because I wanted to build great things and make a positive contribution to society. UK was the perfect setting for my youthful idealism, because the university is committed to educating

the whole person—not only academically, but in terms of character, of becoming a powerful force for the greater good. This is what great universities do. My experiences as a student and an educator were a tremendous foundation on which to build a future. Two professors in particular, Dr. Don Wood and Dr. Hans Gesund, shaped my career and gave me the confidence to succeed.

I also had the privilege of collaborating with many water industry giants, from private industries to research and

government organizations. They taught me so much, and nurtured my personal passion for water resources management. My universe expanded. Working with the UK civil engineering software center and supporting hundreds of engineers from utilities and consulting firms throughout the U.S. and South America in solving their most pressing water distribution modeling problems sparked an unquenchable passion for great technology and a deep appreciation and enthusiasm for innovation and customer care. Their energy, commitment and depth

of understanding made it easier to gain insight into the practical aspects of the water distribution engineering field. All these experiences and more were invaluable when it came time to establish Innovyze.

As for the Bluegrass area, I love Lexington, I love UK and I visit often.

After already earning three degrees, what made you decide to enroll in the Advanced Management Program



Former president Bill Clinton with Paul Boulos at a gala dinner in Washington, D.C. in March 2011.

at Harvard Business School? How has management education served you in your career?

PFB: Change is inevitable and the only constant in life, so you can never stop learning, whether in engineering and technology or business management and leadership. I apply the things I learned at Harvard constantly, identifying and creating opportunities for the benefit of people, organizations and society. To keep improving myself, I just completed an advanced management course at Stanford Business School.

What was it like to receive the U.S. Ellis Island Medal of Honor? What did it mean to you and what was the award ceremony like?

PFB: It was an overwhelming experience and one of the most memorable moments of my life. I strongly felt the presence of my mother, Sitt Marie Rose, whose name is legendary in Lebanon. She was an inspirational humanitarian who lived by her passionate belief in the goodness of human beings. When I was 12, she also died for it. I was deeply honored and proud to receive the medal in her memory. It was humbling to be mentioned in the same breath as the distinguished past and present medal recipients, and the thrill of a lifetime to meet my fellow honorees.

You still maintain strong ties with your former home of Lebanon. What is your involvement like there?

PFB: I have many dear friends, associates and colleagues in Lebanon, and travel there a couple of times a year. I currently serve as chairman of the Board of Trustees of my first alma mater, Lebanese American University, and I founded and chair the Lebanese Advisory Board of America-Mideast Educational and Training Services, Inc./AMIDEAST. I also serve on the AMIDEAST Board of Directors in Washington, D.C. I have been instrumental in helping to raise millions of dollars for

both of these organizations. I served as chair of the Board of International Advisors for the Lebanese American University (LAU) as well as its first ever comprehensive \$50 million fundraising campaign, which was a tremendous success, surpassing its goal by 20 percent. It was followed by a second \$75 million campaign which is still underway. Today, the university is financially robust, with an impressive endowment of around \$430 million—an unprecedented figure in its history. I also served on the external advisory board of the Civil and Environmental Engineering School of the American University of Beirut.

What do you hope to see emerge from your work in Lebanon?

PFB: I believe wholeheartedly in the vital importance of providing an excellent education to all children—young women and men from all backgrounds and

economic circumstances—knowing it is they who will shape the future of their societies, lay the foundations for more sustainable economies and turn despair into greater opportunity for all. Our youth are not only the foundation for a brighter future—they are our future. Their effects will extend far beyond their careers; they will be also exemplary parents, civic leaders and volunteers who will draw their families and communities together. Both LAU and AMIDEAST provide avenues for young people that will create a better Lebanon for the common good—a land of equal opportunity where if you study hard, work hard and have strong values, you will succeed and realize your aspirations for a better life; a land where no matter what your religious beliefs are, where you come from or what your last name is, you can make your dreams come true if you try; and a land that enables more people to live lives of leadership, meaning and purpose. It is the ideal setting for a democratic and free society in which all persons live together in harmony and with equal chances for success. **KEJ**

“Change is inevitable and the only constant in life, so you can never stop learning...”



GIVING WITH GRATITUDE

Nearly 30 years after they first met at the University of Kentucky, John and Karen Maxwell are making more campus memories by funding scholarships in computer science.

If Karen Martin's Delta Zeta sorority sisters couldn't find her on a given night, they intuitively knew where to look: in the University of Kentucky's computing center at McVey Hall.

"Some of my most vivid memories from my time at UK involve developing, editing and testing programs using punch cards at McVey Hall," Karen recalls. "I did that for my first three years of college."

Karen studied computer science, a major she chose because she believed it would offer the most career choices. Also attending UK at that time was mechanical engineering student John Maxwell. Through mutual friends, the two met at Two Keys Tavern in September 1985. A few days later, John asked Karen for a date as they walked home from the library. Two years later, they were married and establishing lucrative careers. John managed construction and design projects at Camp David and the White House before getting an MBA from the Johnson School of Business at Cornell University and joining Procter & Gamble. Karen put her computer science degree to work at MCI (now Verizon), Cornell University, Federated Department Stores and Procter & Gamble before leaving the corporate world to build two businesses of her own—KJMM Capital Partners and Suite Originals.

"UK launched us into adulthood," says John, who has spent the past nine years as a portfolio manager of the Ivy International Core Fund in Kansas City, Kan. "Our education has allowed us to experience a very blessed life and inspired us to give back."

Giving back initially took the form of a scholarship for a student majoring in Karen's field of computer science. The first scholarship was awarded last fall to Andrew Houghton. At the annual David K. Blythe Society Luncheon that unites scholarship recipients with their donors, the Maxwells met Andrew as well as Brent Seales, chair of the Department of Computer Science. During their conversation, Seales conveyed his desire to increase female enrollment in the computer science program—an initiative that clearly resounded with Karen. As a result, the Maxwells established a second scholarship with preference given to a young woman that will start in the fall of 2015.

"One of our two daughters is a biomedical engineering major at the University of Arkansas, so we understand the pressures and decisions—and the cost!—a student has to negotiate in order to graduate with an engineering degree," shared Karen. "UK's engineering students are ambitious, confident and impressive and it makes us feel great to be able to help two worthy recipients lay the foundation for prosperous careers." **KEJ**



Raphael Finkel:
Professor,
Department of Computer
Science

After more than 16 years in development, the first English translation of the entire Suda lexicon—a massive 10th century Byzantine encyclopedia—is complete. The translation, as well as commentary on the Suda's 31,000 entries, is now available for searching and browsing through the Suda On Line (SOL) database at www.stoa.org/sol. Promoting open scholarship, scholars' names are listed next to entries they researched and all entries are fair game for future revision. Computer science professor Raphael Finkel serves as technical director for the project, initially in collaboration with Ross Scaife from the Department of Classics, who died in 2008. More than 200 volunteers have contributed translations and annotations. Finkel designed the database system for the project, which will expand over time. He has taught computer science at UK since 1986.



Vicki Cooper:
GEMS Event Organizer,
Department of Electrical and
Computer Engineering

Since 2005, Girl Scouts from all over Kentucky have visited the University of Kentucky College of Engineering for the one-day Girls in Engineering, Math and Science event—better known as GEMS. Sessions titled “Physics Petting Zoo,” “Alice in Programming Land” and “Warming Up to Worms” are designed to help young girls see science in daily life and as a possible career choice. Having celebrated its 10th anniversary in 2014, GEMS continues to grow. Over 300 participants attended last year thanks to Vicki Cooper, who organizes the event. In addition to coordinating all of the logistics, Cooper tirelessly recruits College of Engineering faculty and graduate students to lend their expertise in fun and creative ways. The next GEMS event will be held November 14, 2015 on the University of Kentucky campus.



Timothy McGill:
Senior,
Biosystems Engineering

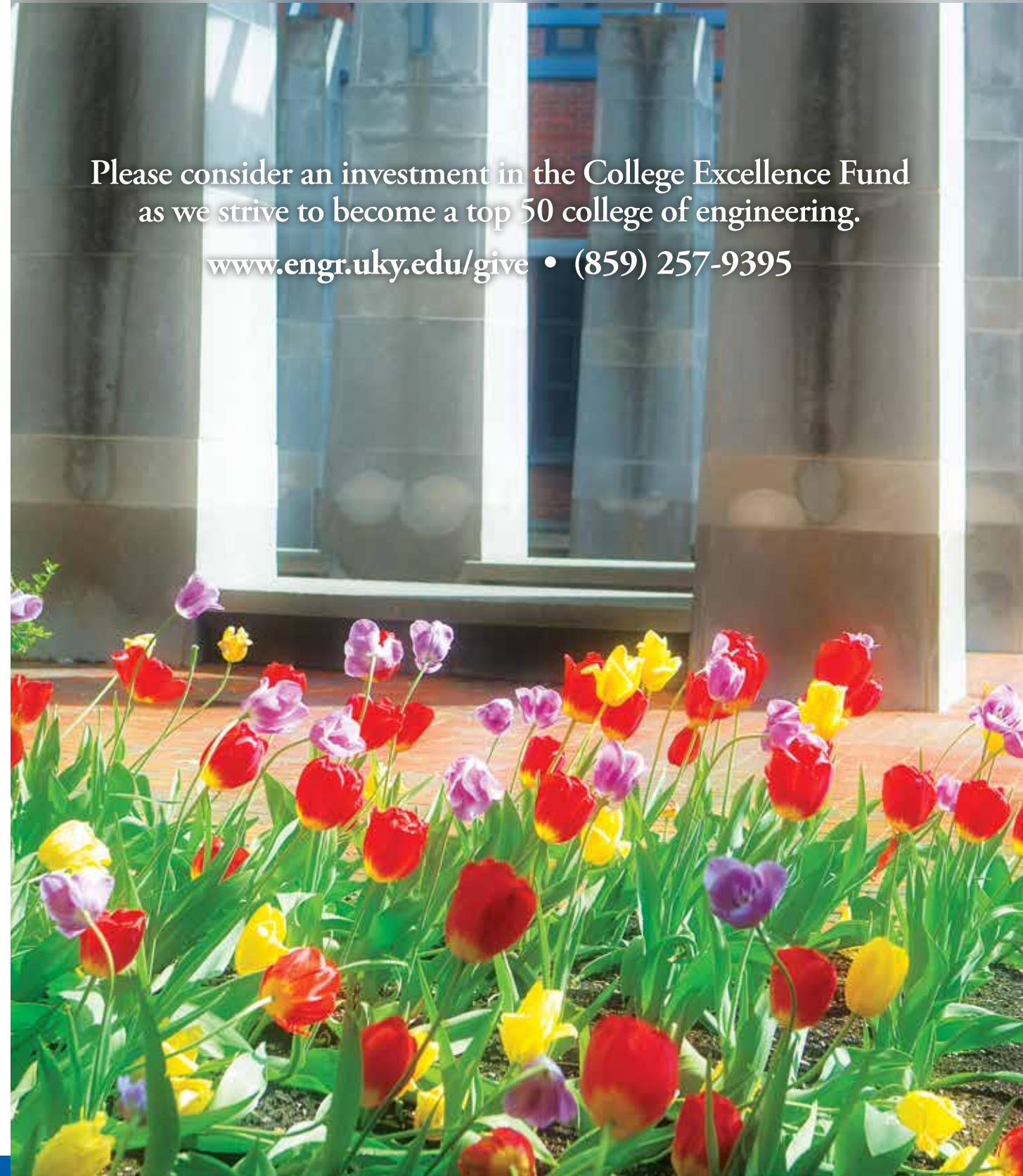
He devises comical skits and dance routines to entertain fans. He stands at the top of the pyramid at women's basketball games. Passionate UK sports fans want selfies with him. He is Scratch—one of UK's famous mascots whose antics delight Big Blue fans at football and basketball games. However, beneath the costume, biosystems engineering senior Timothy McGill is hard at work. Since Timothy assumed the role of Scratch during his freshman year, he has danced, cartwheeled and crowd-surfed his way through some of UK's most memorable moments, such as the football team's losing streak-snapping win over Tennessee in 2011 and the basketball team's 2012 national championship run. While Timothy would love to “go pro” as a mascot, he plans to deepen his interest in machine systems automation through graduate studies.

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HALL OF DISTINCTION

Initiated in 1992, the Hall of Distinction recognizes and honors those alumni who have demonstrated distinguished professional accomplishments, outstanding character and commitment to community service. This recognition serves to encourage exemplary achievements by current students and others. It is a symbol of the respect and admiration held by the University of Kentucky College of Engineering for these esteemed individuals.



FLOYD E. HENSON

B.S. IN ELECTRICAL ENGINEERING, 1970

The son of an entrepreneurial father, Floyd Henson founded Veytec, Inc., as an internal start-up and has been the president and CEO since 1982. Veytec is a leading provider of networking security and storage solutions in the southeastern United States to businesses as well as state and local governments. It partners with top companies such as Cisco, Dell, Microsoft, IBM, HP and others to offer the most advanced products available coupled with superior customer service. Under Mr. Henson's leadership, Veytec designed, built and deployed Unix servers and communications in over 3,500 truck stops and designed and implemented the communication network for over 5,000 auto parts stores. Mr. Henson has won numerous awards, including the 1978 Intel Developer of the Year.



JOHN W. KYLE

B.S. IN COMPUTER SCIENCE, 1991

A summer spent tinkering with a Texas Instruments computer (TI-99) coupled with a love for mathematics led John Kyle to major in computer science. After graduating, he embarked on a successful career that began with designing software for Ford Aerospace Corp., and applications for supercomputing industry leader Cray Research, but eventually propelled him into marketing, customer service and high-level leadership roles. In 2007, he won a Web Marketing Association award for his Web presence strategy. Mr. Kyle is currently president of Apesoft, Inc., and operates his own consulting firm, Kyle Venture Advisors. Passionate about leadership development, Mr. Kyle helps companies identify and mold leaders and launch internal start-up companies within the parent company.



J. WAYNE PURDOM

B.S. IN CHEMICAL ENGINEERING, 1969

Wayne Purdom began his career in the refining industry at Humble Oil & Refining Company in 1969. Sixteen years later, he became operating services department manager for ExxonMobil Refining and Supply—Baton Rouge. He worked for ExxonMobil until his retirement in 2012. During Mr. Purdom's 44-year career, he became a recognized leader in applied process safety management, improving business unit performance, personnel selection and development, litigation and emergency response. In the United States and abroad, Mr. Purdom consistently demonstrated leadership in normal and abnormal situations—in 1989, he coordinated the cleanup operation of the Exxon Valdez oil spill—as well as entrepreneurial instincts that increased business unit safety, efficiency and profitability. Upon retiring, Mr. Purdom founded Assessments, Consulting & Emergency Services, LLC.

CLASS OF 2015

INDUCTED APRIL 24, 2015



G. MICHAEL RITCHIE

B.S. IN CIVIL ENGINEERING, 1972

Mike Ritchie is the former president and CEO of Photo Science (now Quantum Spatial), an aerial mapping company headquartered in Lexington, Ky. Mr. Ritchie bought the company in 1990 and under his leadership, Photo Science became one of the largest geospatial solutions companies in the United States, increasing revenue from \$1 million to \$42 million annually. Photo Science's operations expanded to 10 regional offices across the U.S. with a staff of over 200 employees. During his time as president and CEO, Photo Science won numerous national awards for its work, including the American Council of Engineering Companies National Engineering Excellence Award in 2003 and 2011. In 2008, Mr. Ritchie was appointed by President George W. Bush to advise the federal government on how to implement geospatial technology.



KENNETH L. SEIBERT

B.S. IN MECHANICAL ENGINEERING, 1983

Ken Seibert is president of CMTA Consulting Engineers, the largest mechanical, electrical and plumbing consulting firm in Kentucky and a top 60 firm in North America. Under Mr. Seibert's direction, CMTA has earned a national reputation for designing energy efficient buildings that leave a smaller carbon footprint on the environment. The firm has engineered 126 ENERGY STAR® buildings and 35 LEED® (Leadership in Energy & Environmental Design) projects, incorporating high performance design strategies into all of its building projects. CMTA is the national leader in Net Zero Energy buildings—structures able to generate needed energy through renewable systems on site—and has completed nine of them. Mr. Seibert was named the 2008 Planner of the Year by the Kentucky Chapter of the Council for Educational Facilities Planners International.



MICHAEL L. STRAIN

B.S. IN COMPUTER SCIENCE, 1973

Mike Strain's inspiration to pursue an education in computer science came from a three-year stint in the United States Army; the prevalence of computerized communications in the Army convinced him computers were going to be the future. Beginning in 1976, Mr. Strain spent 7 ½ years at Texas Instruments (TI), an experience that led him to found Spectrum Digital, Inc., in 1986. Spectrum Digital generates development tools that allow engineers and programmers to develop with new technology. Over the last 29 years, it has gone from a three-person operation to a fully integrated company that sells products worldwide. The company targets high growth, large volume markets that require specialized technology and is the largest provider of development boards and emulators for TI microprocessors.



Members of the UK Solar Car Team involved in the contest include:

- **John Broadbent**, electrical engineering and computer engineering senior
- **Daniel Cambron**, electrical engineering and computer engineering senior
- **Chris Heintz**, mechanical engineering senior
- **Joshua Morgan**, electrical engineering and computer engineering senior
- **Daniel Zach Reeder**, mechanical engineering junior

UK Solar Car Team Wins National Fluke Corporation Contest

by Whitney Harder, UKPR

In January, Seattle-based Fluke Corporation named the University of Kentucky Solar Car Team winner of the Fluke Connect Student Contest. In addition to a paid trip to Fluke headquarters to meet with Fluke executive and engineering leadership and tour the facilities, the team received \$1,000 worth of Fluke tools as well as the Fluke Connect tools used in the contest submission—worth approximately \$2,500. Student teams across the nation participated in the competition.

The UK Solar Car Team designed a project that conducted live testing of performance parameters on the UK Solar Car using Fluke Connect, Fluke Corporation's wireless test tools that connect to smartphones. Their objective was to increase the efficiency of the UK Solar Car by at least 10 percent, while saving time by quickly finding and minimizing inefficient components.

According to a Fluke Corporation news release, they saw a 16 percent decrease in idle energy consumption and 5.5 percent increase in dynamic energy efficiency.

"Winning the Fluke Connect contest has been a tremendous opportunity for the team," said Daniel Cambron, team manager of the UK Solar Car Team. "When we heard about it, we were very excited to be able to publicly showcase our engineering talent and use state-of-the-art tools."

"The University of Kentucky Solar Car Team strives to use the latest technology on their solar powered vehicle. The team was able to use the new wireless meters to monitor critical values, collect and send data to smart phones, as well as use a thermal imaging camera to diagnose and troubleshoot electrical issues," said Matthew Morgan, manager of external education programs at West Kentucky Community and Technical College and an advisor to the Solar Car Team.

The Solar Car Team will participate in the annual Formula Sun Grand Prix race, which will be held in Austin, Texas this July.



2015 Great Teacher Award Recipients:

- **Tim L. Uhl**, Department of Rehabilitation Sciences
- **Pearl James**, Department of English
- **Sameer Desai M.D.**, Department of Emergency Medicine
- **Irina Voro**, Department of Piano
- **W. Brent Seales**, Department of Computer Science
- **Timothy R.B. Taylor**, Department of Civil Engineering

Seales and Taylor Named 2015 Great Teachers

W. Brent Seales, professor and chair of the Department of Computer Science, and Timothy R.B. Taylor, assistant professor in the Department of Civil Engineering, have been given 2015 Great Teacher Awards by the UK Alumni Association. The Great Teacher Award is the oldest continuously given award teachers can receive at the university and all nominations are made by students.

The UK Alumni Association recognizes six professors each year. Each professor is awarded a plaque and a \$3,000 cash award at a recognition dinner. Seales and Taylor were among this year's winners recognized at half-court during the UK men's basketball game on February 21, 2015.

Seales has taught computer science at UK since 1991. He has served as director of the Center for Visualization and Virtual Environments and became chair of the Department of Computer Science in 2013. In 2012-2013 he worked as a visiting scientist at the Google Cultural Institute in Paris, France. Seales is a world-renowned

expert in image processing, especially as it is related to archeological artifacts. Seales was nominated by Stephen Parsons and John Walker.

"Dr. Seales is highly invested in the future success of the computer science program at UK and how that success should start and end with the students," said Parsons.

Taylor joined UK as an assistant professor in the Department of Civil Engineering in 2009. His primary research areas include public policy for large systems, management of complex projects and system dynamics. In 2012, Taylor became program manager of construction engineering and project management at the Kentucky Transportation Center. He was nominated by Huang Liu, Ying Li and Jiwen Zhang.

"Dr. Taylor invests a great deal in his students," said Li, a graduate assistant. "He leaves his door open and is always happy to help students with whatever questions we have."

Student Commons Gets a Facelift



Over the summer, the Oliver H. and Anne Raymond Student Commons, located in the Ralph G. Anderson Building, received a much-needed transformation. While still popular with students looking for a place to study near engineering classrooms, many felt it was starting to show its age. Through the generous

donations of the Raymond family and the UK chapter of the Society for Women Engineers (SWE), the Commons has been significantly upgraded.

“The students really like the renovations that have been made to the Commons,” affirmed Sam Meffert, former vice president of SWE. “We have added different power sources in the room, a variety of tables and spaces appropriate for private study, as well as group projects. We intentionally tailored this area according to the feedback from all the engineering organizations.”

Dean John Walz lauded the collaborative achievement.

“The renovations that have taken place here are truly incredible. We now have comfortable, functional, beautiful workplaces for students to study either independently or together collaboratively. This is really a tremendous boost to the College of Engineering.”

Honaker Named 2015 Robert H. Richards Award Winner



In October 2014, mining engineering department chair and professor Rick Honaker was selected as the 2015 recipient of the Robert H. Richards Award for his substantial contributions to the advancement of mineral and coal processing research, technology, education and

professional service. The award was created in 1948 and recognizes achievement that unmistakably furthers the art of mineral beneficiation in any of its branches. It is one of the nine major awards presented by The American Institute of Mining, Metallurgical and Petroleum Engineers.

Honaker received the award at a dinner during the annual Society for Mining, Metallurgy & Exploration conference and exhibit held in Denver, Colo., in February. As the award recipient, Honaker also delivered a lecture at the Mineral Processing Division Awards plenary session titled “Contributions to the Sustainability Efforts in Coal Preparation.”

“This is a significant honor for me,” said Honaker. “I could not have realized this achievement without the support of the college and the university.”

Honaker has been a UK faculty member since 2000 and chair of the Department of Mining Engineering since 2007.

Cambron Wins Prestigious Fortescue Scholarship



University of Kentucky senior Daniel Cambron, a double major in electrical engineering and computer engineering, has been announced as the

2015 winner of the IEEE Charles LeGeyt Fortescue Scholarship. The scholarship was established in 1939 as a memorial to Charles LeGeyt Fortescue in recognition of his valuable contributions to the field of electrical engineering. The annual scholarship carries a stipend of up to \$24,000 and is awarded for one year of full-time graduate work in electrical engineering at an engineering school of recognized standing located in the U.S.

Cambron plans to begin graduate studies at UK next fall and complete his master's degree in electrical engineering the following spring. He is enrolled in the University Scholars Program and has been a member of the UK Solar Car Team for the last four years. Cambron's research areas include electro-mechanics, embedded systems and controls and he is interested in how the combination of those fields relate to the complicated systems that comprise electric vehicle drivetrains.

Pennell Receives NSF CAREER Award

Kelly G. Pennell, assistant professor of civil engineering, has received the prestigious National Science Foundation CAREER Award for her project “Vapor Intrusion, Knowledge Brokers and Environmental Health—A Three Dimensional Perspective.” The CAREER Award is one of the NSF's highest awards and it supports junior faculty who “exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations.”

The average person spends 90% of their time indoors, which makes indoor air quality extremely important. There are many sources of indoor air contamination, but one that is too often overlooked is the transport of subsurface vapors into indoor air spaces (i.e. vapor intrusion). Vapor intrusion is notoriously difficult to characterize. Extremely low chemical concentrations in indoor air are health-relevant and modeling indoor air and subsurface domains requires sophisticated computational fluid dynamic approaches. Pennell's research project will bridge the gap that exists between air transport modeling of aboveground spaces and subsurface spaces.

Pennell joined the faculty of the Department of Civil Engineering in 2013. She received her Ph.D. from Purdue University in 2005.



CLASS NOTES

Bill Marsh, BSME 1963, completed 25 years as an engineering consultant in spring 2015. He has planned expansion projects, designed production equipment, improved maintenance reliability, overseen capital project installations and suggested safety improvements for major steel tube and pipe industry production facilities. He resides in Mansfield, Ohio.

Thomas W. Webb, BSEE 1967, retired in 2010 as principal engineer at J.O.M. Consulting Engineers in Dallas, Texas.

David Yeary, BSME 1971, recently retired from NASA's Johnson Space Center. He resides in Houston, Texas.

John L. Carr, BSCE 1972, MSCE 1975, recently retired from CDM Smith as a senior transportation engineer and relocated from Lexington, Ky., to Winston-Salem N.C. In 2003 after serving 31 years, John retired from the Kentucky Transportation Cabinet as deputy state highway engineer. During his 42-year career in transportation, he served in numerous state and national capacities relating to transportation planning, NEPA analysis, finance and policy.

Ronald J. Ebelhar, BSCE 1975, MSCE 1976, was named 2015 chairman of the ASTM International board of directors. ASTM International is one of the world's largest international standards developing organizations. He is a senior principal with Terracon in Cincinnati, Ohio.

J. Steven Gardner, BSAE 1975, BSMNG 1991, was elected the 2015 president of the Society for Mining, Metallurgy & Exploration. His term began March 1, 2015. He is president of ECSI, LLC in Lexington, Ky.

Mark E. Davis, BSCE 1977, MSCE 1978, Ph.D. 1981, received the 2014 Prince of Asturias

Award for Technical and Scientific Research. The Asturias Prize represents the highest scientific recognition in Spain and one of the most prestigious scientific honors in Europe. He is the Warren and Katharine Schlinger Professor of Chemical Engineering at Caltech. Recognized as a pioneer in the field of nanotechnology, Davis is a member of the National Academy of Engineering, the Institute of Medicine and the National Academy of Sciences.

Darrell A. Blair, BSCE 1980, is president of the industrial materials segment of GrafTech International, headquartered in Parma, Ohio. He previously served as vice president of global services for GrafTech's graphite electrode line of business.

Sondra Zimmerman Marston, BSME 1984, is a retired U.S. Air Force pilot. She was elected president of the O'Fallon Women's Club in Belleville, Ill.

Kimra H. Cole, BSCE 1987, has been promoted to general manager and vice president of Columbia Gas of Kentucky operations. She is responsible for all field operations throughout Columbia's 30-county service area in Kentucky and Ironton, Ohio. She resides in Lexington, Ky.

Chris Brewer, BSEE 1990, has been named president and CEO of Clark Energy in Winchester, Ky. He previously worked for Bluegrass Energy in Nicholasville, Ky., for more than 24 years.

Timothy D. West, BSME 1990, a Colonel in the U.S. Air Force, was recently reassigned to Arnold Air Force Base, Tenn., where he orchestrates test operations at the world's largest and most advanced complex of flight simulation test facilities. The Arnold Engineering Development Complex consists of 43 aerodynamic and propulsion wind tunnels, rocket and turbine engine test cells, space environmental chambers, arc

heaters, ballistic ranges and other specialized units. Prior to this assignment, West held a variety of leadership positions in acquisition, engineering and test and evaluation, including three command tours.

Chris S. Perry, BSEE 1993, in the president and chief executive officer for the Kentucky Association of Electric Cooperatives in Elizabethtown, Ky. He had served as the CEO of the Fleming-Mason Energy Cooperative in Flemingsburg, Ky.

Johnny M. Highfield, Jr., BSCE 1998, is the operations coordinator at Marathon Petroleum Co. refinery in Catlettsburg, Ky.

Elizabeth Lester, BSCE 1999, has joined Equifax as in-house counsel. She previously worked as an associate at Sutherland Asbill & Brennan LLP. She was one of four recipients of the 2014 Georgia State University Intellectual Property Community Service Award. She resides in Atlanta, Ga.

Rob May, BSEE 2000, recently sold the company he founded, Backupify, where he served as CEO. Backupify is the leading provider of cloud-to-cloud backup and recovery solutions for Software as a Service (SaaS) applications. He joined Datto, the new owner of the company, as senior vice president where he is responsible for expanding Datto's cloud-to-cloud backup business and oversees the marketing and business development teams. He lives in Belmont, Mass.

Mary Beth Wright, BSCE 2002, is a business development executive with Messer Construction in Lexington, Ky. Her duties have expanded to include oversight of the company's business development efforts in Messer's southern regions.

BE INCLUDED

Please send Class Notes to
alumni@enr.uky.edu

Six Inducted into Hall of Distinguished Alumni

Every five years the UK Alumni Association recognizes outstanding alumni and honors them by inducting them into the Hall of Distinguished Alumni. On April 17, six engineering alumni were among the 23 selected for the 2015 class. See more at www.enr.uky.edu/hoda.



Timothy A. Byers
Civil Engineering, 1981



L. Berkley Davis, Jr.
Mechanical Engineering,
1966, 1970, 1972



Thomas B. Deen
Civil Engineering, 1951



Holloway Fields, Jr.
Electrical Engineering, 1951



Ernest Lee Fletcher
Mechanical Engineering, 1974



Thomas W. Lewis
Mechanical Engineering, 1971

IN MEMORIAM

Edwin C. Barkman	Mining Engineering	1942
James M. Hisle	Electrical Engineering	1946, 1951
Dale Crabtree	Mechanical Engineering	1947
Thomas L. Lyons	Electrical Engineering	1950
George C. Williamson	Electrical Engineering	1950
Clell E. Stewart	Electrical Engineering	1951
Guy W. Baker	Electrical Engineering	1952
John A. Sproule	Electrical Engineering	1954
Donald E. Beeler	Civil Engineering	1958
Theo Greene, Jr.	Civil Engineering	1958
Bobby R. Flener	Civil Engineering	1960
Richard L. Trauth	Mechanical Engineering	1961
William F. Byrne	Mechanical Engineering	1962
James L. Crutcher	Mechanical Engineering	1963
Nick F. Stamatis	Civil Engineering	1963
Jay E. Queen	Electrical Engineering	1964
Kyle D. Hammers	Mechanical Engineering	1974
John W. Zachem	Mechanical Engineering	1975
Robert A. Bohanan	Electrical Engineering Manufacturing Systems Engineering	1988 1997

Asit K. Ray, 60, professor of chemical engineering, passed away November 11, 2014 after a year-long battle with cancer.

"Asit dedicated his life to teaching students and doing outstanding research in the aerosols area," said longtime friend and colleague Dibakar Bhattacharyya. "We are going to miss him dearly."

Ray became assistant professor of chemical engineering at the University of Kentucky in 1980. He was promoted to associate professor in 1985 and became full professor in 1988. From 2007-2012, Ray held the W.T. Bryan Professorship in Engineering.

Ray is survived by his wife, Sharmistha, and children, Rohit and Neha.

OUT OF THE LAB

On a given day in Lexington, you may hear the jingling of bells and come upon a troupe wearing colorful outfits, brandishing sticks or handkerchiefs and engaging in a dance characterized by one expert as “a bodily manifestation of vigour and rude health.” This is the phenomenon known as Morris Dancing, a pastime computer science professors Judy Goldsmith and Andy Klapper claim goes back to at least the time of Shakespeare. While the colorful, physically demanding enactment is not for the faint of heart, Goldsmith and Klapper invite anyone interested to drop by a rehearsal.

What is involved in Morris Dancing?

Goldsmith: The dances are performed in the formation of a six-pack, with coordinated, choreographed galumphing, waving of handkerchiefs or bashing of sticks. Dancers wear bells on their shins and colorful costumes appropriate to the season and engage in high-impact aerobics to live music.



How long have you been dancing? And where do you dance?

Klapper: Judy has been dancing for over 40 years and I started after I met her. We rehearse in Berea on Thursday nights, and perform at venues such as Lexington’s Mayfest, the Midway Fall Festival, at nursing homes and senior centers, day care centers and sometimes even in the dean’s office! We also travel to gatherings of Morris dancers called “ales” across the country.

How can would-be Morris dancers in the Lexington area get started?

Goldsmith: You can call or email us about upcoming practices and performances. Our group, Squash Beetle Morris, performs at weddings, garden parties, brises and, of course, for the pure enjoyment of the dance. Come galumph with us! [KEJ](#)



William N. and Ocie M. Downey

Thanks to their foresight and love for the University of Kentucky College of Engineering, William and Ocie Downey’s planned gift has been aiding students for almost 30 years.

Mr. Downey graduated from UK in 1925 with a bachelor’s degree in civil engineering. He spent most of his career with Seaboard Coast Lines and, upon his retirement, taught at UK. He died in 1979 and his wife, Ocie, passed away in 1986. Upon her death, her estate established the William N. and Ocie M. Downey Scholarship. Awarded to civil engineering students based upon their aptitude and character, 20-30 scholarships are awarded annually. For nearly 30 years, approximately 750 students have received scholarships.

For more information about supporting engineering education through estate planning, contact Jeff Snow, Director of College Advancement at (859) 257-9191 or jeff.snow@uky.edu.

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