Engineering Diversity Programs Celebrates 45th Anniversary
I am excited and delighted to have joined the college during a time of such progress and momentum. It is great to see thriving diversity programs with a rich history focused on helping and encouraging our current and future engineering students.

As dean, I want to be actively involved in ways to increase diversity with both multicultural and female populations. There’s a good base here, but I’d love to see that grow, especially in partnership with our board and with industries. I cannot overstate the importance and need for diversity in the work force and in academia.

Personal mentoring and mentoring programs have always been a priority for me. I am a strong believer in research opportunities for undergraduates and the power of real problems and partnerships in the community that bring realism into the classroom and in research. This is particularly important to diverse populations, who are eager to make a difference.

For many years, my focus on diversity has included the creation of new programs and implementing best practices related to mentoring as well as hiring, student support, networking opportunities, and professional development.

A little bit about my background: I served as the founding chair, and later as co-chair, of the Broadening Participation Committee for the Design Engineering Division of the American Society of Mechanical Engineers. During my 10-year leadership, the committee hosted national pre-conference workshops, bringing the community together via professional development topics and establishing a sustained network of underrepresented faculty and graduate students. While a professor at Virginia Tech, I served as an NSF Advance Professor and on the leadership team of the AdvanceVT program for more than six years. As department chair at Iowa State University and head at Penn State University, through hiring and mentoring, the percentage of women in these departments grew to over 30 percent of faculty and students. I fully intend to bring the same dynamic to the Tickle College of Engineering. I am also looking forward to working with you—our alumni—and Travis Griffin’s incredible team to continue and grow the efforts at UT to bring about meaningful change. It is wonderful to see how engaged our students are in pursuing excellence and meaningful change. It is wonderful to see how engaged our students are in pursuing excellence and meaningful change. It is wonderful to see how engaged our students are in pursuing excellence and meaningful change.

Sincerely,

Janis Terpenny
Dean and Wayne T. Davis Dean’s Chair

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NSBE Team Finishes Third in National Competition

By David Goddard.

A team of Engineering Vols set a new standard for excellence last fall, becoming the first team from UT to win the Academic Technology Bowl at the National Society of Black Engineers (NSBE) Region 3 Conference in Montgomery, Alabama.

“We saw having the different backgrounds as an advantage to us in the competition because it made us able to divide and conquer study topics as we prepared to compete,” said Kassidy Boone, who served as TORCH chair for UT’s group. “Though we weren’t all familiar with all of the topics presented, we were able to learn from each other’s mistakes and better prepare for the competition.”

Categories included mathematics, statics, computer science, thermodynamics, mechanics of materials, and NSBE history, with the event itself split into two rounds.

While everything turned out great for UT in the end, Boone said the first round was anything but, with UT’s team trailing the other squads. Slowly but surely, the team pulled itself back into contention, eventually winning on the final question.

“Our team kept its composure and made an amazing comeback at the end,” Shannon Sharp said. “When they announced that we had won, we went crazy and celebrated ecstatically for UT’s win.”

Boone and Sharp both said the experience brought the team closer together, showed what is possible through both NSBE and the college, and served as a credit to Travis Griffin, the Fred D. Brown Jr. Director of Engineering Diversity Programs and team mentor.

Team members included:

Kassidy Boone, junior, MechE
Shannon Sharp, junior, MechE
Kendra Jackson, senior, Civil, former NSBE president
Mubuso Nikosi, senior, ChemE, former NSBE vice president
Hunter Mann, senior, CompE, former NSBE telecommunication chair
Talecia Dyson, senior, Civil, former NSBE secretary

Founded in 1975, NSBE has more than 29,900 members, making it one of the largest student groups in the country.

“NSBE at UT is so much more than a campus organization,” Sharp said. “Since my freshman year, it has been the place where I can easily meet new people and make valuable relationships, has pushed me to be a better student, friend, and future engineer, and perhaps most of all, has given me professional development and opportunities to gain meaningful experience.”

Boone echoed that sentiment, adding that she views UT’s NSBE chapter as “nothing less than a family,” and that she looks forward to what the group can accomplish in the future.

Thanks to their win, the team moved on to compete at the national convention in late March where they placed third.
Engineering Diversity Programs Celebrates 45th Anniversary with Gala


More than 150 people turned out Friday, November 2, for a gala luncheon celebrating the 45th anniversary of the college’s Engineering Diversity Programs (EDP).

Using the theme “45 Years of Community Excellence: A Celebration of Continuing Growth,” the event took place at the Foundry on the Fair Site and drew alumni from across the years as well as faculty, staff, and students to celebrate the office, its impact, and successes yet to come.

“This event was a good way for us to get together and talk about some of the things this office has meant,” said Director Travis Griffin. “It serves to connect current students with alums that came before them.”

As part of the ceremony, the director’s position Griffin holds was renamed the Fred D. Brown Jr. Director in honor of Brown, who pioneered engineering diversity efforts at UT.

Brown created the office, then known as the Minority Engineering Scholarship Program (MESP), in 1973, at a time when there were only 26 African-American students in the entire college.

Renamed the Office of Diversity Programs in 1999, the office serves to increase the number of underrepresented students, including African-American, Hispanic, Native American, Pacific Islander, Alaskan Native, and females.

The program blossomed under Brown’s leadership and that of his successors, James Pippin and now Griffin, to the point that more than 1,000 minority engineering students have now graduated from the college, a number that continues to grow.

“Having a ready-built group of underrepresented students is one key to helping them succeed academically,” Griffin said. “Being a part of a community, of something larger, is a bond that has helped our students for 45 years.”

Participants also met with the college’s then-Interim Dean Mark Dean, himself an alumnus and past MESP participant, to learn about ongoing diversity efforts in the college.

Current and former students shared some of their favorite memories from the last 45 years:

“Mr. Pippen talked my parents into letting me come from Memphis to Knoxville on the Greyhound so I could take the pretests. Pip was instrumental in my decision to be an engineer.”
—Sabrina Hampton

“Seeing how proud my mother was when they approved in church that her son had received an engineering scholarship to UT.”
—Charles Scott

“I have enjoyed the lifelong friendships that have truly changed my life.”
—Micheal Turner

“When I courted my wife of now 30 years at UT!”
—Sherman Burton

“Having the opportunity to share my talents and provide assistance in increasing underrepresented students. Working with a great team to achieve equal opportunity.”
—Francisco Vargas

“My favorite memory was the dedication of the Fred Brown Dorm. I was so proud to see a lasting testament to his dedication and hard work.”
—Cavanaugh Mims

“Running into Mr. Brown as he walked the campus. He would always stop, challenge you on how things were going, and then offer words of encouragement. We always enjoyed speaking with him because he made it clear out purpose was to graduate and succeed in life.”
—Robert Lewis

“As a member of Group 5, we were able to come to campus prior to the start of the quarter and meet other previous group members and our peers. Those friendships are lifelong and I still am friends with my group members today.”
—Karen Raymond

tickles.utk.edu/diversity
SWE Caps off Spring Semester with Student Life Awards

The Division of Student Life named UT’s Society of Women Engineers (SWE) as the “Best Large Organization of the Year.” This award recognizes a large student organization that has fulfilled its mission, involved the campus in its purpose, plays a leadership role on campus, is involved in the campus community, is open-minded and diverse, has the ability to accept and overcome challenges, and sustains itself in creative ways. This honors SWE for developing and implementing improvements in the quality of student life.

This recognition is the latest in a series of awards SWE earned during the 2018-19 school year. At the annual SWE conference, UT brought home the Gold SWE Collegiate Mission Award for embodying SWE core values and demonstrating continuous improvement and growth toward strategic goals. They also brought home the SWE Best Practice in Mentoring for excellent practice in our SWEties mentoring program.

The SWEties mentoring program strives to improve the retention of female engineering students by supporting students through continuous mentoring, networking, and professional development training. There are over 140 individual participants in SWEties this year. Among the 76 freshmen involved in the program, there was a 96 percent retention rate within engineering from fall to spring semesters. SWEties participants noted that the program helps freshmen find resources on campus and increases responsibility and confidence of mentors.

At the first annual Council of Partners Banquet in March, SWE received the Program of the Year Award in recognition of the SWEties mentoring program and the Community Outreach Award for their Tomorrow’s Engineers Today outreach event.

Tomorrow’s Engineers Today gives middle- and high-school-aged girls the opportunity to see engineering labs on campus, do engineering projects, and learn more about each kind of engineering. This year, SWE brought in 53 girls, and 90 percent of participants said they learned something new about engineering during the day’s events. Over 70 percent of participants said they were more interested in becoming an engineering student after attending.

UT’s SWE chapter has 262 members and hosts a variety of professional, social, outreach, and academic events and programs throughout the year for engineering students and the Knoxville community.

By Kalie Knecht.
Completed an Internship
Ibefayo Akinduro (ME, Jr.) Procter & Gamble in Greensboro, North Carolina
Frenando Blevins (IE, Jr.) SC Johnson in Racine, Wisconsin
Kassidy Boone (ME, So.) Southern Company Gas in Atlanta, Georgia
Fernando Bulnes-Karg (ME, Jr.) Oak Ridge National Laboratory in Oak Ridge, Tennessee
Terryl Dodson (CS, So.) Oak Ridge National Laboratory in Oak Ridge, Tennessee
Daiben Driver (CE, Jr.) PepsiCo in General Electric Aviation in Cincinnati, Ohio

Harrison Ooi (MSE, Jr.) IACMI in UT Department of Civil and Environmental Engineering
Avery Nowlin (CE, Jr.) Cisco Booz, Hamilton, and Allen in Professional Practice.

Remi Koch (IE, Jr.) Tesla in teaching. I not only got to give these students the fundamentals they need to succeed in engineering, but I also taught them about the importance of giving back to the community.

Accepted a Position
Evelynn Borrego (ME, Sr.) Consolidated Nuclear Security in Oak Ridge, Tennessee
Breanna Ellis (MSE, Sr.) Denso Manufacturing in Maryville, Tennessee
Laura Ferrer (CE, Sr.) Whiting-Turner in Washington, DC
Rojae Johnson (CS, Sr.) Booz, Hamilton, and Allen in Huntsville, Alabama

Completed an Undergraduate/Graduate Research Experience
Sunday Aduloju (CE, PhD) UT Department of Civil and Environmental Engineering
Amir Battle (CE, Jr.) UT Department of Electrical Engineering and Computer Science

Matthew Rivera (CE, Jr.) Denso Manufacturing in Maryville, Tennessee
Sydnee Ruff (CE, So.) Johnson & Johnson in Skillman, New Jersey
Sebastian Sanchez (ME, So.) Dow Chemical in Midland, Michigan
Shannon Sharp (ME, So.) PepsiCo in Plano, Texas

Maurice Spurgeon (ME, Jr.) Jackson WWS in Gray, Kentucky
Carl Woodard (ME, So.) National Renewable Energy Laboratory in Golden, Colorado
Arianna Worthy (AE, Jr.) General Electric Aviation in Lynn, Massachusetts

Kea Francis (ME, Sr.) UT Department of Mechanical, Aerospace, and Biomedical Engineering
Naydia Futrell-Peoples (CE, So.) UT Department of Mechanical, Aerospace, and Biomedical Engineering
Ariadna Garcia (ME, So.) UT Department of Mechanical, Aerospace, and Biomedical Engineering
Jovan Hernandez (CE, Jr.) Georgia Tech Summer Undergraduate Research Experience

Hilafu Tesfu Hilafu (CE, PhD) UT Department of Civil and Environmental Engineering
Helena Sanders (NE, Fr.) UT Department of Nuclear Engineering

Completed a Cooperative Education Experience
Remi Koch (IE, Jr.) Tesla in Fremont, California
Mubuso Nkosi (CE, Jr.) ExxonMobil in Spring, Texas
Matthew Rivera (CE, Jr.) Eastman Chemical in Kingsport, Tennessee
Jasmine Toy (NE, So.) Southern Company in Birmingham, Alabama
Corey Williams (IE, Sr.) Shaw Industries in Dalton, Georgia
Carl Woodard (ME, So.) General Electric Aviation in Lynn, Massachusetts

Completed an Undergraduate/Graduate Research Experience
Sunday Aduloju (CE, PhD) UT Department of Civil and Environmental Engineering
Wilbert Wheeler (ME, Sr.) NASA in Huntsville, Alabama

Writing and photography by Randall Brown.

Taylor Short offers an enthusiastic evaluation of her time as an instructor for the 2019 Summer Engineering Advancement (SEA) program. "Amazing," she said. "Nothing can replace the actual experience of getting in front of a classroom and teaching. I not only got to give these students the fundamentals they need to succeed in engineering, but it gave me a baseline of my growth as an educator." It's a full-circle experience for Short, a 2018 graduate women. She has seen the excitement build as students feel a sense of community and support for their involvement in WomEngineers activities.

"I know students who have gotten involved in undergraduate research, or involved in a student organization, or made their best friends because of connections they made at these events," she said. "I feel fortunate to have had the opportunity to contribute to even one person’s growth and success.”

Taylor Short

Around that same time, the college was beginning to talk about starting the WomEngineers Leadership Council and holding the second biennial WomEngineers Day, said Short. “I got asked to participate in a panel discussing the needs of female students in the college, and I just felt motivated and inspired to make a difference in my community.” She joined the council, and her passion grew for the WomEngineers activities. She has seen the excitement build as students feel a sense of community and support for their involvement in WomEngineers activities.

"I know students who have gotten involved in undergraduate research, or involved in a student organization, or made their best friends because of connections they made at these events," she said. "I feel fortunate to have had the opportunity to contribute to even one person’s growth and success.”

Taylor Short enhanced her academic career by staying active in undergraduate research and through co-op opportunities from the Office of Engineering Professional Practice.

"I believe a large factor to getting the co-op position I did at Southern Company was from the experience I gained in undergraduate research," she said. “It was also interesting how much more I was motivated in my classes after my co-op. Seeing the direct applications of the things I was learning in school made it a significantly more impactful experience.”

Taylor Short’s full-circle progress continues. She plans to finish her degree in May 2020, move forward toward her PhD in engineering education, and ultimately teach electrical engineering.
Student and Faculty Contributions Honored at Council of Partners Banquet


EDP hosted the inaugural Council of Partners Awards Banquet on March 25 at the Foundry on the Fair Site in Knoxville. The banquet highlighted the accomplishments of diversity student organizations and members of the campus community who have been catalysts for change in regard to diversity and inclusion in their departments, colleges, and abroad.

Approximately 67 faculty, staff, students, and Council of Partners members attended. Companies that offered support to the leadership and professional development goals of our student organizations included Denso, Messer Construction, Norfolk Southern Corporation, PepsiCo/Frito-Lay Inc., Tennessee Valley Authority, and Shaw Industries.

The event’s keynote speaker, former Interim Dean of Engineering Mark Dean, encouraged attendees to appreciate the opportunities given to them and the responsibilities of being a mentor. “Engineering is a wonderful profession, allowing its practitioners to have tremendous impact on our families, communities, state, nation, and global society,” said Dean. “This also places a significant dependency on engineers to get it right. This is a burden engineers must embrace, be humbled by their responsibilities and potential, and enjoy every minute.”

Among the attendees were leaders and members from the National Society of Black Engineers (NSBE), Society of Hispanic Professional Engineers (SHPE), and the Society of Women Engineers (SWE), all of which achieved notable accomplishments in the past year.

“SHPE this year has succeeded in 80 percent of the board obtaining co-op, internship, research, and full-time positions,” said past president Laura Ferrer (’19, Civil). “As a chapter we have all become better leaders, better students, and better professionals. Moreover, we have paved the way for future freshmen, taking four freshmen to the SHPE regional conference in San Antonio, Texas, over Spring Break. At the subregional conference, the chapter was awarded the Leadership Award along with the Blue Heart Award. We are excited to see what goals we can achieve next year.”

At the banquet, awards were given to two student-organization programs and one faculty member to recognize the contributions of support to college-wide recruitment and retention efforts.

SWE’s SWEeties Mentoring Program was named Program of the Year, while the Community Outreach Award went to SWE’s Tomorrow’s Engineers Today outreach event (see p. 5 for more details). SWE also recognized members Lauren Desjardins, Mohima Mohsin, and Jess Ossyra for their exemplary dedication to SWE.

Rachel McCord, lecturer and research assistant professor, won the Faculty of the Year Award, which recognizes an outstanding professor, lecturer, or instructor on the basis of good instruction, mentoring, outstanding teaching, and service to students. One nominator described McCord as an “incredible champion for our section,” while her colleagues commented on her impact on the college in multiple ways over the past few years. Her sphere of influence and service reaches across the spectrum, from prospective students to undergraduates (especially freshmen), faculty, the administration, and the local community.

MEP Alumni Spotlight: Nicholas Brabson

By Randall Brown.

The past decade has gone by fast for electrical engineering alumnus Nicholas Brabson. “It feels like I was just walking across the stage to get my diploma,” he said, and hasn’t slowed his pace since that 2009 commencement stroll. The Knoxville native advanced to a planning engineer position with the Tennessee Valley Authority in Chattanooga and then to his current role as transmission technical support supervisor at Southern Company in Atlanta.

“I get to work with some of the best and brightest engineers in the country,” said Brabson. “Every day brings on a different challenge.”

Southern Company provides power to large areas of Georgia, Alabama, and Mississippi. Brabson’s team oversees application and first-line information technology support for the company’s transmission-design engineers and helps employees resolve technical issues as they arise.

“I also have the responsibility of managing the relationships with both our internal and external customers, so I enjoy figuring out what they need as well,” he said. He meets his responsibilities on a foundation he started building even before college.

“The Office of Engineering Diversity Programs started investing in me as a middle schooler, high schooler, or higher,” said Brabson. “I participated in the MITES and HITES programs as a child, and these opened my eyes to the world of engineering.”

At the Engineering Vol, he maintained motivation with encouragement from the Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP).

“TLSAMP was the conduit that helped us form bonds with other minority students who were pursuing engineering,” said Brabson. “We went into our freshman years with our own network of people who encouraged and motivated each other to pursue our degrees with excellence.”

He appreciated that colleagues in the program—and former director James Pippin—helped him stay accountable in his studies. “Having people around you going through the same issues as you is helpful in not quitting,” he said. “James Pippin is responsible for a lot of the TLSAMP students’ current careers, and we are forever indebted to him.”

Brabson also gained experience via co-op rotations with Oak Ridge National Laboratory and established valuable bonds beyond the engineering campus through the Mu chapter of Alpha Phi Alpha.

“I think it’s important that students have a well-rounded collegiate experience,” he said. “Joining a fraternity helped me meet and socialize with other students I probably would have never met otherwise.”

Brabson pays forward the lessons he’s learned to the next generation of professionals as a member of the Emerging 100 of Atlanta. This mentoring program contributes to the academic and vocational success of Atlanta-area high school seniors, particularly at BEST Academy High School, a predominately African-American, all-boys school.

“I get the opportunity to pour back into these young men who are asking some of the same questions I had as a high school student,” he said. “I especially like to seek out students who are interested in pursuing engineering as college major.”

Brabson’s Knoxville connections remain strong. His parents, Pastor Frederick and Delores Brabson, live in town, so he and his wife Amber, four-year-old son Nicholas Jr., and three-months-old daughter Ava visit regularly. He is also an enthusiastically involved alumnus with an eye toward helping students who might be experiencing the same challenges he faced.

“No one is successful on their own, and everyone at some point has had help to get to where they are in life,” said Brabson. “Staying connected to UT helps me to identify the next Nicholas Brabson, and allows me to help that person navigate their studies and launch their career.”

I participated in the MITES and HITES programs as a child, and these opened my eyes to the world of engineering.
EDP Calendar

August
1–4: SHPE NILA Conference
19: MEP Meeting
19: TCE Welcome Week Events
24: NSBE/SHPE/SWE Retreat
27: WomEngineers Welcome Dinner
29: Engineering Cookout

September
16: NSBE/SHPE/SWE Evening with Industry
17: Council of Partners Networking Breakfast
17: Engineering Expo
23: Engineering & STEM Job Fair
27–28: GEM GRAD LAB

October
7: MEP Meeting
24: Engineers Day
30–31: SHPE National Convention

November
1–2: SHPE National Convention
7–9: SWE National Convention
15–16: NSBE Regional Conference

December
4: MEP End of Fall Event
13: Commencement

January
6: MEP Meeting
11: NSBE/SHPE/SWE Retreat

February
13–14: TLSAMP Research Conference
24: MEP Meeting

March
2: Council of Partners Awards Banquet
7: TCE College Day
25–28: NSBE National Convention

April
4: NSBE/SHPE/SWE Transition Retreat
24: MEP End of Spring Event

May
7: Graduate Hooding
7–9: Commencement

All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Equity and Diversity, 1840 Melrose Avenue, Knoxville, TN 37996-3560, telephone 865-974-2498. Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Equity and Diversity. A project of the Office of Engineering Diversity Programs with assistance from the Tickle College of Engineering Office of Communications. PAN E01-1305-204-002-20. Job 396208.