

COLLEGE OF ENGINEERING AWARDED BEST STEM PROGRAM BY HBCU DIGEST



(Pictured L to R) Washington, D.C. Alumni chapter member Leonard Stephens; Dr. S. Keith Hargrove, Dean of the College of Engineering; Dr. Reginald McDonald, TSU's director of University Bands; WDC Alumni Chapter president Andrea Warren; WDC Alumni Chapter members Jocelyn Smith and Nahshon Bigham. (submitted photo).

Tennessee State University's College of Engineering received top honor at the recent 2017 HBCU Digest Awards.

TSU was a finalist in 10 categories of the Historically Black Colleges and Universities' Digest Awards. Its College of Engineering won for Best Science, Technology, Engineer and Mathematics (STEM) program, and the Aristocrat of Bands got Best Marching Band.

The winners were announced July 14 at the seventh annual HBCU Awards ceremony in Washington, D.C. Finalists were selected from more than 175 nominations from HBCUs across the country.

Dr. S. Keith Hargrove, dean of the College of Engineering, said the HBCU award received recognizes the hard work of its faculty, staff and students.

"The demand for engineers, technologists, and comput-

er scientists still exceeds the supply, and our dedicated faculty and staff are committed to providing a quality education with their engagement in classroom and laboratory learning," he said.

Also this month, Hargrove received the INSIGHT into Diversity magazine's 2017 Inspiring Leaders in STEM Award, which pays tribute to those who inspire a new generation of young people to consider careers in science, technology, engineering, and math.

Last year, TSU received HBCU awards for: Alumna of the Year, Dr. Edith Mitchell; Female Coach of the Year, Track and Field Coach Director Chandra Cheeseborough-Guice; and Female Student of the Year, RaCia Poston.

Excerpt from TSU Newsroom (7/17/17) by L. Johnson.

College of Engineering News

Engineering Welcomes New Faculty

Electrical and Computer Engineering:

Dr. Ali Aldarraji
Dr. Kevin Santiago
Dr. Ahmed Sherif

Aeronautical and Industrial Technology:

Dr. Carlos Beane

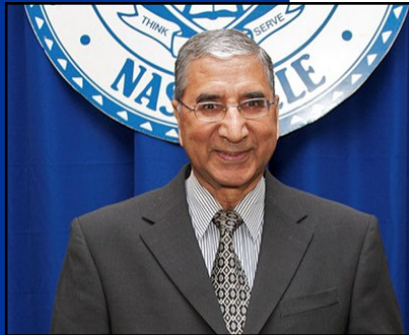
Computer Science:

Dr. Swastik Brahma
Dr. Uttam Ghosh
Mr. Abdul Al-Malek
Dr. Erkan Kaplanoglu



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Professor Retires After 47 Years of Service



Dr. Satinderpaul Devgan

Dr. Satinderpaul Devgan served as Professor and Head of Electrical and Computer Engineering at Tennessee State University from September, 1979 until retirement on June 30, 2017. He received his M.S. and Ph.D. degrees in Power Systems from Illinois Institute of Technology before joining Tennessee State University in 1970. He developed and implemented concentration in Computer Engineering under the BS EE program and guided the BSEE program through past five consecutive (30 years) ABET reaccreditations with NGR, a record matched only by about 20% of all engineering programs. He also developed and implemented M.S. and

Ph.D. in Computer and Information Systems Engineering (CISE) degree programs. The graduates of these programs represent 21.9 percent female and 33.0 percent under-represented minority thus making significant contributions to national workforce diversity at higher levels. He has published in IEEE and ASEE Conference Proceedings. He is the PI of the successful competitive proposal for the Center of Excellence in Information Systems Engineering and Management funded by Tennessee Higher Education Commission (THEC). He is a recipient of Outstanding Researcher of the Year award in 1994 from Tennessee State University and is a charter member of its Million Dollar Research Club. He has served as Chairman of Southeastern Association of Electrical Engineer-

ing Department Heads (SAEEDH), the Electrical and Computer Engineering, and the Systems Engineering Divisions of ASEE. He also served as Editor of ECEDHA Newsletter from 2001 to 2006. He served as Secretary of the BOD of Southeastern Center for Electrical Engineering Education (SCEEE) from 1995 to June 2017, and two terms as an IEEE ABET Program Evaluator. He is a Life Senior Member of IEEE, Life Member of ASEE, a member of Eta Kappa Nu, Sigma Xi and Phi Kappa Phi Honor Societies. He is a Registered Professional Engineer in the State of Tennessee, and is an IDEAL (Institute for Development of Excellence in Assessment Leadership) Scholar. *Excerpt from Dr. Satinderpaul Devgan's biographical sketch. Photo from TSU archives.*

College of Engineering News

Students Compete in Military Design Challenge

A team of nine undergraduate students from the College of Engineering participated in the annual University Design Challenge (UDC-2017) on April 12, 2017. This competition is an annual event sponsored by the U.S. Air Force Research Laboratory (AFRL).

The students were challenged to “invent” a resupply device, manually or autonomously operated, controlled, or programmed to haul items on rough and unimproved surfaces.

The load capacity of the device had to be a minimum of 350 lbs. and have a traveling speed at least as fast as a human walker (3 - 15mph) with traveling distance of at least 2 miles without refueling. The device had to be able to traverse narrow paths, climb steps, and navigate over rocks, logs gaps and obstacles.

The TSU student team designed, built and demonstrated an autonomous

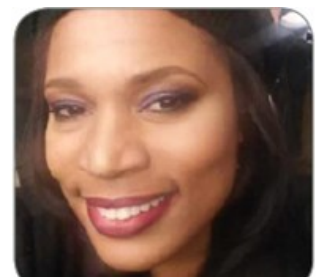


vehicle that could be operated manually and with remote control and met the above requirements stated by AFRL.

The TSU design team consisted of Antony Currie (ECE), Kevin Scott (ECE), Larry Perdue (ECE), Charles McFadden (ME), Donald Toohey (ME), Michael Winters (ME), William Sanders (CS), Ryan Brisentine (CS), and Danielle Haik (CS). Faculty advisors were Dr. Fenghui Yao (CS), Dr. Landon Onyebueke (ME), and Dr. Saleh Zein-Sabatto. (ECE). The design team and faculty advisors are pictured above with the autonomous vehicle. *Photo and article submitted by Dr. S. Zein-Sabatto.*

Ph.D. Program's First African American Woman Graduates

Dr. Kimberly Gold is the first African American woman to graduate from TSU's Computer and Information Systems Engineering Ph.D. program (May 2017). Her research involved using sensor fusion to detect proximity in smartphones. She worked in the CyberViz Lab under the guidance of Dr. Sachin Shetty. Currently, Dr. Gold is employed as an engineer in the Expeditionary Warfare Department at the Naval Surface Warfare Center, Crane Division in Indiana. She holds a B.S. in electrical engineering (1999) and M.S. in biomedical engineering (2005) from Tennessee state University. *Excerpt from NAVSEA Soundings, March 2017.*



Dr. Kimberly Gold

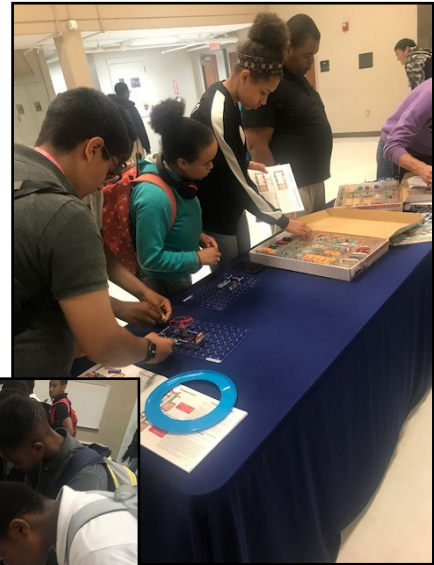
Have news to share with the TSU Engineering community? Submit your news and announcements to bkingwil@tnstate.edu.

TSU Students Participate in K-12 STEM Outreach at Stratford STEM Magnet School

TSU College of Engineering is an advocate of K-12 STEM initiatives and is often involved in outreach to K-12 schools across Tennessee. On September 22, Stratford STEM Magnet School held its annual Science and Engineering Day in Nashville, TN. Computer science students Cassandra Brown (graduate) and Kiara Armstrong (undergraduate) participated in the event on behalf of the College and engaged in hands-on engineering activities with high school students.



Kiara Armstrong helps two Stratford High School students with an engineering activity (above).



Cassandra Brown stands at College of Engineering table at Stratford Magnet School Science and Engineering Day (above). Cassandra works with a high school student (upper right).

News Briefs



Jerry Kibet (right) being sworn-in as a cadet during a ceremony in June 2017.

U.S. Airforce Awards Student \$18,000 Scholarship

Jerry Kibet, sophomore aeronautical and industrial technology (AIT) student received an \$18,000 scholarship from the U.S. Airforce. Jerry, a native of Kenya, is the first TSU student in more than three years to receive the Air Force's Type 2 scholarship. At a ceremony in June, Jerry signed a contract with the Air Force and was sworn-in as a cadet. He will train with the AFROTC Detachment 790 at Tennessee State University. Jerry's concentration is aviation flight training, and has aspirations to become a pilot. *Excerpt from TSU Newsroom (6/13/17) by E. Freeman.*

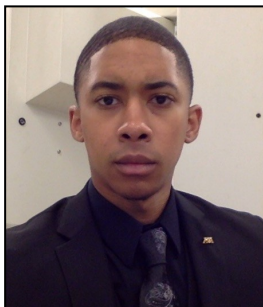
Dean Hargrove Discusses Mass Transit

On June 29, television station WKRN held a town hall meeting to discuss mass transit in the Nashville area as a result of its historic growth. Dean S. Keith Hargrove served as a panelist during the meeting. He informed the audience that the College of Engineering is "very engaged in the need to improve transportation." Moreover, Dr. Hargrove mentioned that the College of Engineering "has had in excess of a million dollars in research, primarily funded from the Tennessee Department of Transportation." *Excerpt from TSU Newsroom (6/29/17) by L. Johnson.*



Dean S. Keith Hargrove pictured third from left.

Student Internship Spotlight



Tyler Ridley

Tyler Ridley worked as a member services intern at the Nashville Technology Council during summer 2017. His role included designing and creating reports from databases and assisting in the implementation of all aspects of customer relationship management (CRM) system. Tyler is a senior mechanical engineering major.

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TSU Hosts Middle and High School Competitions

The College of Engineering hosted both the Science Olympiad (March 2017) and STEM Expo (April 2017) welcoming over 700 middle school and high school students to the TSU campus. These events are a success because of the faculty, staff, and student participation. A special thanks to Dr. Catherine Armwood for leading the Science Olympiad initiative. According to Dean S. Keith Hargrove, the College of Engineering plans to hold similar events in the future.



Students display a project at the STEM Expo in the Gentry Center. *Photo by C. Buggs, TSU Media Relations.*

Engineering Alumni Sponsor Students



Pictured L to R: Dr. Curtis Johnson, Johanna Outlaw, Katrina Harris, Sherrill Toran, Dr. Glenda Glover, and Roosevelt Luster. Back row L to R: George Davis and Douglas Crocker.

The Engineering Alumni Chapter sponsored 10 engineering and computer science students to attend the Annual TSU Scholarship Gala on October 13. This important fundraising initiative provides critical funds necessary to meet the significant need for student scholarships and ensures access to the relevant academic programs required to successfully educate and prepare students for the global marketplace. Some of the alumni chapter's members are pictured left with TSU administration. *Photo submitted by Johanna Outlaw.*

“Think. Work. Serve.”

College of Engineering Partners with Verizon

Through a partnership with Verizon, TSU has joined 15 other HBCUs across the country to teach minority middle school students skills like coding, 3D design and robotics.

The Verizon Innovative Learning Program is intended to engage students in grades 6-8 to interact with technology through on-campus summer-intensive courses, as well as year-round mentoring. The Department of Computer Science in the College of Engineering is coordinating the program at TSU.

Middle school students attending the Verizon Innovative Learning Summer Camp receive instructions from program facilitators in a computer sci-

ence lab at TSU. (Photo by Emmanuel Freeman, TSU Media Relations)

This summer, more than 60 area middle school students participated in one of two sessions on campus. For two weeks the students and teachers built several mobile apps for Android, did hands-on labs, and visited the Adventure Science Center in Nashville.

Dr. Tamara Rogers, associate professor of computer science, is the coordinator of the Verizon program at TSU. She said the students also designed and created their own apps using tools like the MIT App Inventor, an innovative beginner's intro-



duction to programming and app creation.

Students in the program will continue throughout the academic year. Once a month they will come to the TSU campus and work on their mobile apps, Rogers said. *Excerpt from TSU Newsroom (7/19/17) by E. Freeman.*

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