UT Engineering Student Shaunte Hunter

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A Message from the EDP Director

Greetings!

We have had an exciting, busy year and you will see just a preview of all the great things happening within this issue. I would like to thank the students, faculty, staff, and administration who voluntarily participated within efforts of this annual publication.

The EDCU newsletter includes many notable highlights such as the College of Engineering (COE) Summer Pre-College Programs. The High School Introduction to Engineering Systems (HITES) program was founded in 2001 and has provided an experience to 177 high school student juniors and seniors. Based on the HITES 2010 program, 86% of the participants have been accepted to a four-year university majoring in a science, technology, engineering, and mathematics (STEM) discipline. Based on the Bechet HITES 2011 program, 86% of the seniors are planning to major in engineering with 77% planning to attend the University of Tennessee, Knoxville, in Fall 2012. Due to the success of these programs, the COE will expand 2012 Summer Pre-College Programs by 40%, providing experiences for up to 160 middle and high school participants.

As we continue to expand over the years, there has been an urgency to grow in staff to provide additional support for pre-college and undergraduate student development. We are pleased to welcome Zaragosa “Mito” Espinoza as coordinator and Dawn Hall as administrative specialist within the Office of Engineering Diversity Programs (EDP). Both bring passion to further and accomplish professional success of these programs, the COE will expand 2012 Summer Pre-College Programs by 40%, providing experiences for up to 160 middle and high school participants.

New Staff Members on Board with Engineering Diversity Programs

Engineering Diversity Programs welcomed Zaragosa “Mito” Espinoza as coordinator and Dawn Hall as administrative specialist in January of 2012. Espinoza took on his current role after being an academic advisor in the UT College of Business Administration. He came to UT from Waco, Texas, where he worked at Baylor University. With a BA from Texas A&M and an MS from Baylor, Espinoza is currently working towards a Higher Education Administration Ph.D. here at UT. He plans to study the motivations of Latino males who are the first in their family to pursue higher education.

“As a Latino, first-generation college student at a predominately white institution, I struggled with the transition to college life and was supported by organizations and programs that sought to increase diversity and enhance the experience for underrepresented populations,” said Espinoza. “I chose to get involved with student affairs to give back and help other students that may also be struggling with the transition to college life.”

The aspect of EDP that Espinoza enjoys most is interacting with students. Their stories, and what he calls their “amazing feats of dedication, diligence, determination, and talent,” impress him to the point of wanting to increase the enrollment and graduation rates of underrepresented ethnic minorities in STEM. We cerdelly invite all to join us for a Showcase of Corporate Diversity @ UT on February 28th and discuss the future. In closing, we would like to thank our alumni and corporate supporters, whose generous support provides our university with enrichment and scholarships. Thank you all for your efforts, and if you are in the area, please stop by and visit us in 1102 Coulson Hall.

Go Vols!

Travis Griffin, Director
Engineering Diversity Programs

KNOXVILLE — Shaunte Hunter, a junior in mechanical engineering at the University of Tennessee, Knoxville, has been selected as a semi-finalist for the Women of Color in Science, Technology, Engineering, and Mathematics (STEM) Community Award. This award recognized Hunter, from Chattanooga, for her great work in and out of the classroom and was presented to her at the UT Women of Color STEM Conference in Dallas on Nov. 4, 2011.

The Women of Color conference showcases workshops in STEM professions throughout the nation awarded for achievements. Workshops and networking opportunities are a major feature of the conference, helping to motivate minority women to achieve in male-dominated fields.

Hunter was nominated for the award by Eric Stokes and Travis Griffin, both UT staff who have noticed her impact on the engineering community, specifically through her involvement with Minority Enhancement for Undergraduate Research Training (ME4UT) and high school juniors and seniors about STEM majors and working to encourage and recruit potential students.

“Shaunte is an ideal student who balances social involvement, service to her school and community, and, of course, academics. Persuading through the challenging major of engineering is extremely difficult. To do it as a ‘double minority’ — being African American and female — makes the achievement even more special,” said Stokes.

First African-American Female Ph.D. graduate in Nuclear Engineering at UT

Jamie Anderson is the first female African-American student to graduate with a Ph.D. in nuclear engineering. The Knoxville native earned her BS in 2008; her MS in 2009; and accepted her doctorate at the spring 2012 graduate hooding ceremony.

Anderson’s studies are within the radiological engineering concentration. Her research interests include measurements and modeling of the effectiveness of shielding materials for use in space environments; Monte Carlo simulation of radiation shielding codes; and methods for estimating environmental levels of radioactivity.

“Dr. Anderson is very bright, personable, focused, hard-working, and enjoys to work with,” said Dr. Lawrence Townsend, who was Anderson’s thesis advisor and worked closely with her throughout her studies. “Her career goal is to become a university faculty member. There is absolutely no doubt in my mind that she will succeed in doing so, and will be extremely successful in that role.”

In her work as a graduate research assistant, Anderson helped develop new HETC-RATREET estimates of detector response for the Cosmic Ray Telescope for the Effects of Radiation (CRaTER) instrument on the Lunar Reconnaissance Orbiter (LRO) spacecraft; analyzed the actual CRaTER flight mission data; computed LET and dose response for CRaTER using the HZETRN calculations; and presented her work at the spring 2012 NASA CRaTER and HETC-RATREET workshops.

Anderson also spent summer 2008 as a Reactor Engineering Summer Intern at the Tennessee Valley Authority Watts Bar Nuclear Plant in Spring City, Tenn.

In addition to her field work and coursework, Anderson has been honored with several awards in her academic career, including the Hall of Fame Award at the 2012 Tennessee Louis Stokes Alliance for Minority Participation (TSLAMP) Banquet. She has presented numerous papers and co-authored journal articles in CRaTER research and on estimating radiation exposures of a solar dust particle event on Mars.

“She also recognizes and accepts that she is a role model for female nuclear engineering students in general, and African-American ones in particular,” said Townsend.

Anderson will continue her research with CRaTER on a post-doctorate basis at UT with Dr. Townsend via funding by the University of New Hampshire. She plans on seeking a professorship post-her post-doctorate work.

Griffin said he nominated Hunter for her outstanding involvement in ME4UT; her commitment as an engineering student and the extra effort she puts forth to encourage and assist students, including bringing a group of high school students to visit UT’s engineering program and helping identify promising students.

Both men see her as a very valuable asset to the College of Engineering and the university.

In reference to the coursework of STEM majors, Hunter said, “It’s not hard, just a challenge. You have to fight through it.” She enjoys using her experiences and knowledge to encourage other students.

Hunter found out she won the award earlier this fall. “It has not set in yet. I was shocked. It’s a really good feeling,” she said.

She was excited about attending the conference and was impressed with the diversity and dedication of other engineering professionals. “It’s always good to see women achieve big. It’s exciting, especially in school, but seeing others’ successes makes you feel like you can achieve, as well,” Hunter said. “Motivation is big for me. This award helps me feel secure about the career path I have chosen.”

The College of Engineering sponsored a group of students who attended the conference with funding through the Tennessee Louis Stokes Alliance for Minority Participation (TSLAMP) program, another organization encouraging minorities to participate in STEM majors. For more information about Women of Color, visit: http://www.womenofcolor.net/.

Shaunte Hunter
Bechtel HITES Program a Success!

The College of Engineering (COE) hosted its annual High School Introduction to Engineering Systems (HITES) program on July 24-29, 2011, at the University of Tennessee, Knoxville. The program, which was sponsored by Bechtel Corporation, provides hands-on learning experiences designed to motivate students who have the interest and aptitude to consider careers in engineering.

The rising eleventh and twelfth graders participated in an introduction of engineering fundamentals, application of math and science classes, engineering departmental visits, and were able to collaborate with team projects. The program allows students to learn about careers in engineering while spending time in engineering labs and facilities, compete in engineering challenges, and have the opportunity to jump start their academic careers.

Trevor Griffin, Director of Engineering Diversity Programs, is excited about the outcome of this year’s Bechtel HITES program. “I am so pleased with this year’s Bechtel HITES 2011 class,” Griffin said. “The students were very engaged, displayed great interest in the engineering program at UT, and gave outstanding performances within their engineering group projects. Because of the generous support from Bechtel Corporation, we were able to expand our staff by two counselors, hire a math faculty member, and expand our mathematics twenty-four participants to thirty-two participants.

The week of engineering activities concluded with the Bechtel HITES Awards Reception, which was moderated by Alexandria Butler, a senior in biomedical engineering. Bechtel’s Senior Vice President, John Howitzain, who is also a member of the COE Board of Advisors, welcomed attendees and stated that the Bechtel and UT engineering programs are strengthed with UT. Thomas Mrazo also attended the event as a Bechtel representative. Dr. Wayne Lawrence, dean of the COE, gave the opening remarks, which was followed by an overview of the student program from Griffin. A highlight video from the event’s week was then shown to attendees.

Bechtel then announced the Marshalltown Catapult Competition award recipients as well as the participant award recipients. The program followed up with presentations of cueus and program staff awards. Participants from the program then expressed their interest in the week’s programs to the event attendees.

“Such week really made me love math,” a student from Farragut said. “I really felt close to everyone here, and it made me focus on what I want to do in college.”

Another student from Soda-Daisy said, “I learned about all the different types of engineering, I had a blast! Thanks to UT and for allowing us to come out here.”

Dr. Richard Bennett, Director of the Engineering Fundamentals Division, then presented the Engineering Project Awards, which was followed by a project presentation from the winning group.

Most Outstanding Engineering Project Brandon Hanbrick, Amber Nixon and Torre Ford

Dr. Masood Parang, Associate Dean for Academic and Student Affairs, concluded the week’s events.

UT Hosts Second Annual TLSAMP Awards Banquet

The University of Tennessee, Knoxville, hosted its Second Annual Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP) Awards Banquet on Monday, April 16, 2012, at the Foundry. Mito Espinoza, new coordinator of the Engineering Diversity Programs (EDP), moderated the event. The goal of the TLSAMP program is to increase the enrollment and graduation rate of underrepresented ethnic minority students (Hispanic-American, African-American, Asian-American, Alaskan Native and Pacific Islanders) in science, technology, engineering and mathematics (STEM) by at least 100 percent at the end of the five-year period.

Dr. Carolyn Hodges, Vice Provost and Dean for the Graduate School, and Dr. Masood Parang, Associate Dean for Academic & Student Affairs, welcomed guests, students, faculty and program staff. Participants were recognized for their exceptional involvement in the TLSAMP program. Dr. Calvin Mackie, an award winning mentor, a former engineering professor, an internationally renowned motivational speaker, and a successful entrepreneur, was the evening’s guest speaker. Mackie’s lecture was titled, “Free Willie: Identifying Your Passion and Unleashing Your Innate Abilities.”

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Dr. Masood Parang, James Pippin, Dr. Calvin Mackie, Mackenzie Washington (Presenter)

Diamond Wallace, Marquinta King, Dr. Masood Parang (TLSAMP Faculty of the Year Award)

TLSAMP Graduating Seniors Awards

Levon Brashfield, Electrical Engineering Alexandria Butler, Biomedical Engineering Rajeev Byman, Nuclear Engineering Lain Castellanos, Nuclear Engineering Rosesharon Charm, Industrial Engineering

TLSAMP Scholar of the Year Award

Aeron Glover, Industrial Engineering

Dr. Masood Parang, James Pippin, Dr. Jamie Anderson, Paula Anderson, Dr. Calvin Mackie, Keneth Perry, Travis Griffin

Dr. Masood Parang and Aeron Glover (TLSAMP Scholar of the Year Award)

TLSAMP Scholarship Award Recipients

Ashley Upford, Melissa Penny, Dr. Masood Parang (TLSAMP Faculty of the Year Award)

Tia Tabors, and Tiffany Stithophanes (NSBE Golden Torch Award)

Diamond Wallace, Marquinta King, Dr. Masood Parang (TLSAMP Outstanding Faculty of the Year Award)

Scott McCullough, Alexander Lang, and Drea Shelly (NSBE Honored Alumni Award)

Dr. Masood Parang, James Pippin, Dr. Jamie Anderson, Paula Anderson, Dr. Calvin Mackie, Keneth Perry, Travis Griffin

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Dr. Masood Parang and Aeron Glover (TLSAMP Scholar of the Year Award)
Emerging Technologies in STEM by Darryl Bell, TLSAMP Scholar

When he told the audience that someone can make up to $1.6 million per year pursuing an advanced degree, Asher supplied another jaw-dropping moment for those in attendance. Education you gain the opportunity to see the world in a more complex and meaningful way. Besides the obvious benefit of being more advanced in your field of study, you are prepared to tackle more complex challenges in audience engagement: “How is the audience going to find you when they are searching online for you during the workday.”

A basketball website. This button allows those fans that are unable to get to a TV to swiftly minimize and disguise any March Madness games they are watching online during the workday. Factual information on the importance of graduate school. He’s sharing a light on the importance of STEM majors at high-powered companies such as TBS. The importance of STEM majors in the workplace.

Donald Asher presents with a welcome gift from Marquinta King

Applying to Competitive Graduate Schools by Alexandria Butler, TLSAMP Scholar

After gaining the attention of the audience, Asher discussed how to become “marketable” when applying to graduate schools. He suggested always applying to your alma mater, not necessarily considering nationally recognized schools as always using reliable graduate school finders like Petersons.com and Phibs.org. In letters of recommendation, grades, GRE scores, and an essay are important. Asher suggested that you not let factors like grades and scores discourage you from applying to a school. He suggested you can make your candidacy more appealing by contacting faculty to work with you in a way that allows you to work toward a successful masters degree.

When presenting to the members of TLSAMP in the fall, Don Asher caught everyone’s attention by starting with one word: “Money.” A gesture on how to encourage and mentor students seeking to use their education to pursue the benefits of graduate school. Besides the obvious benefit of being more advanced in your field of study, Asher pointed out that by continuing your studies in postgraduate education you gain the opportunity to see the world in a more complex and fascinating way. By earning a master’s degree, you automatically qualify to make substantially more money than someone who does not pursue an advance degree. Asher supplied another jaw-dropping moment when he told the audience that someone can make up to $1.6 million dollars in some fields by earning a Ph.D.
The National Society of Black Engineers (NSBE) recognized four University of Tennessee, Knoxville, students with scholar awards for the 2011-2012 academic year at the organization’s annual national convention held in Pittsburgh, Pa., on March 28-April 1, 2012.

The awards were presented at NSBE’s 15th Annual Golden Torch Awards event to honor exemplifying the organization’s ideals of academic excellence, professional success, and dedication to improve the African-American community.

Shanel Crawford-Harris, an electrical engineering senior from Brownsville, Tenn., received the NSBE Fellows National Scholar award. Aeron Glover, an industrial engineering senior from Memphis, Tenn., received the NSBE Board of Corporate Affiliates and Fulfilling the Legacy National Scholar awards. Johnson Luma, a civil engineering freshman from Memphis, Tenn., received the NSBE Board of Corporate Affiliates National Scholar award. Michael Massey, a mechanical engineering sophomore from Memphis, Tenn., received the NSBE Academic Improvement National Scholar award.

The mission of NSBE is to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally, and positively impact the community. NSBE is the largest student-run organization in the country with more than 29,000 collegiate, pre-collegiate, alumni, and lifetime members all over the globe.

UT’s Top NSBE Scholars

Dr. Masood Parang, Associate Dean for Academic and Student Affairs with (left to right) Tiffany Sithiphone, Johnson Luma, Michael Massey and Aeron Glover

SAVE THE DATE

Join us on Friday, November 2, 2012 for a special afternoon designed to showcase the Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP) program, honoring its past and discussing its future. You will have the opportunity to listen to and ask questions of administrators, faculty, staff, and students.

Friday, November 2, 2012
1:30 PM - 3:00 PM in 108 Estabrook Hall and 6:00 PM to 8:00 PM located in the University Center Ballroom.

Following the showcase, you are encouraged to attend the Homecoming Reception celebrating the 10th Anniversary of TLSAMP Program at the University of Tennessee.