

ENGINEERING & TECHNOLOGY TIMES

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News and Notes from the College of Engineering and Technology

Dedicated to Student Success, Regional Transformation and Public Service

PROGRAMMING THE FUTURE Camp exposes girls to engineering, technology careers

Area ninth-grade young women built tiny computers and got a close-up look at potential career fields as part of the inaugural Engineering and Technology Summer Academy at East Carolina University.

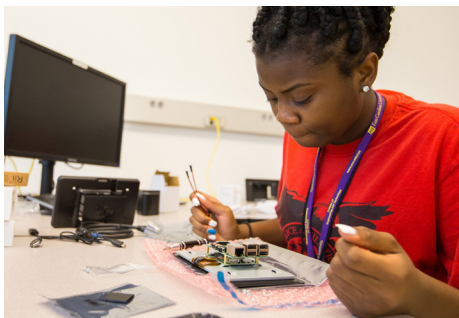
"Since I like doing technology, making and fixing stuff, I think that it's helped me have a clearer path for my future," said Talisha Mills, a rising freshman at Ayden-Grifton High School.

The academy was made possible by a \$100,000 grant from Duke Energy through the Duke Energy Foundation. The Duke Energy Foundation awards more than \$25 million in charitable grants annually for projects that are vital to community health, such as education and workforce development.

"Without their funding, this academy could not have happened," said its co-organizer, Margaret Turner, who is the director of marketing and outreach in the College of Engineering and Technology at ECU.

The program gave local young women hands-on experiences to learn about various STEM (science, technology, engineering and math) jobs in construction management, computer programming, quality assurance and design in manufacturing. The academic sessions were led by faculty in the College of Engineering and Technology.

"I actually liked the surveying part a lot," said Daphne Meyer, a rising freshman at Ayden-Grifton High School.



"I never knew how they built the buildings and set everything up so they could know the exact location on the ground it has to be. I never knew how they got it so exact."

Forty students from Pitt, Greene, Beaufort, Wayne and Lenoir counties participated with 20 attending July 17-22 and the other half July 24-29. The soon-to-be high schoolers sampled college life by staying in a residence hall and eating in a dining hall each week.

"I thought it was very good for her (Daphne) and I was excited for her to be in a college environment and spend the night in a dorm and have the sorority with the other girls," said Daphne's dad, Eric Meyer.

Their week ended with the girls presenting to their parents what they had learned.

"It seems pretty impressive the things that they did," said Meyer. "It's practical knowledge and things she never really realized that went into engineering and building schools, bridges and roads. Just with the surveying, I think, she learned a lot from that."

Students also participated in a "lean manufacturing" workshop where they built airplanes out of Legos and learned how to improve the process needed to meet production goals. The girls toured DSM Dyneema in Greenville where they talked with female engineers. The participants also learned about the product design process and discussed the importance of quality in the manufacturing process.

"It is important for ECU and for eastern North Carolina to have opportunities like this — to pique young students' interest in STEM fields and to show them that a college education is indeed possible for them," Turner said.

The College of Engineering and Technology has approximately 2,500 students studying in undergraduate and graduate programs in computer science,



construction management, engineering and technology systems.

"We have a lot of companies right now that have special days, events that are held for women in IT (information technology) in general, so there is a lot of opportunity and a lot of companies are actively recruiting females to come into the program," said Steve Baker, teaching instructor at ECU who taught campers how to build a Raspberry Pi mini-computer.

"I really wanted to do this because I enjoyed my STEM class during the year at school and I would love to pursue a career in the field," said Alyssa Dunn, a rising freshman at Ayden-Grifton High School. "My favorite part of the whole week was the Raspberry Pi. It was very fun, having to apply your skills and program it and put it together so it felt like you were the one doing all of the work. It was kind of cool having your own device that you built."

The students were able to keep their Raspberry Pi computers and are encouraged to continue to work with the devices at home to expand what they learned at the academy.

— Rich Klindworth,
ECU News Services

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Gregory Poole



Women in ECU's Computer Science Have Bright Future

An effort in East Carolina University's computer science program aims to make more female students aware of opportunities in the field.

The number of computer science majors who are female is relatively low, but it's still higher than when Angela Allen was a student at ECU more than three decades ago.

"There were a few, I can't remember how many, but there were less than 10 ... there were very few women," said Allen, a 1982 ECU computer science graduate and retired IBM executive who lives in Raleigh.

"We have 56 women out of 450 undergraduate students, so currently, it's about 12 percent. ... Ideally we would like to see 50 percent women in computing," said Dr. Venkat Gudivada, chair of the ECU Department of Computer Science. "I'm making a very personal effort to reach out to these students in high schools and try to propagate the message that computing is all about helping humanity. It's not about coding."

In fact, Gudivada and five ECU computer science students are reaching out directly to high school students with the help of Google.

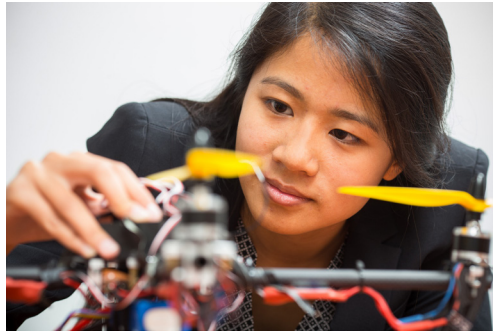
The group won the "igniteCS" award from the tech giant to work with three Pitt County high schools - JH Rose, DH Conley and South Central - to attract more students to computing. The students and their faculty advisor will work with the computer science teachers in the high schools to provide instructional materials and develop computing projects.

"When I was in school, really I didn't know much about computer science. I didn't know what kind of job market it had; I didn't know what you would be doing period," said ECU junior Jakayla Alston, who is one of the students who won the Google award. "I think if we reach out to younger age groups, starting with computer science, I think that might help a little bit, show them what kind of things they could be doing."

Fellow Google project award winner Tiffany Nguyen said, "I feel like studying computer science is empowering yourself. You learn skills, solve problems."

Alston and Nguyen said they think one of the reasons more women aren't in computer science is due to the stereotype that the computer industry is filled with men who code all day in a dark room by themselves.

"Being a woman in computer science, I can break people's expectations of things," said Nguyen, who is a first-year student and an EC Scholar. "People might expect you to be the quiet, reserved kind of person when you're in



computer science, but I like to interact with people. I like to do different activities. I'm not just confined to math and science; I enjoy music, writing, reading different things, sports."

Since women are a minority in computer science, Gudivada feels companies and employers target such graduates to not only make their workforce more diverse, but also give them a different perspective.

"They (employers) really like to hire as many women as possible," Gudivada said. "I think they bring a certain dimension that actually complements, whether it's in the analysis or in the design, so you want to include a woman because they bring a valuable contribution to the workplace."

"There's over a million jobs for technologists in computer science,"

Allen said. "A million jobs - that's a lot of opportunity. It's not just in traditional technology companies; it's in every company. They need people who can bring technology to their thinking."

Alston transferred to ECU after deciding she wanted to work in computer science, she said.

"I chose ECU because I felt that the program was going to challenge me," Alston said. "They talked about what kind of things we could be working on and what kind of resources they have

for us as far as how we can succeed after graduation, so I thought that was fantastic."

"If you are a female and interested in computer science, the world is open to you," Gudivada said. "We call computer science a discipline without boundaries."

Neither Alston nor Nguyen know exactly what they want to do with their future computer science degree. Nguyen is leaning toward something in medical research. Alston is exploring internships to help her figure out which direction she would like to go. In addition to Alston and Nguyen, Matthew Bent, Seaver Thorn, and Maysun Dietrich received the Google grant.

"It's not about what I am, but what I can bring - I can't just sit here and 'milk' the situation that I am the female in computer science. ... I have to always be on my toes no matter what," Alston said.

For Alston, Nguyen and others interested in computer science, all they have to do is look to graduates like Allen to see the opportunities available in the robust field.

"I got an excellent base in computer science here at East Carolina. I've matched my degree to many other people in a large, vast company that I worked in, and they came from various schools," Allen said. "When I think about what women can do with a basis in technology, the world is open to them."

- Rich Klindworth,
ECU News Services





Message from the Dean

Building on Success!

Greetings to all our alumni and friends from ECU's College of Engineering and Technology! Your College is building on our success and the results are impressive!

Once again our College has grown. We now have over 3000 majors in the four College departments. The students are clearly recognizing our valuable programs and they are coming to us in greater and greater numbers! This is an exciting time for us. The large numbers of students do present challenges to our resources, but please be assured that our goal is to maintain the high quality of our programs as we grow.

We also have welcomed a new Chancellor, Dr. Cecil Staton, to ECU. Dr. Staton brings great credentials with experience in academe, the business sector as a CEO, and he was a state senator in Georgia for about 10 years. Dr. Staton has literally hit the ground running as he visits many areas in our region. I am very optimistic about our ability to continue the great traditions of excellence at ECU under his leadership.

We continue to focus attention on our research efforts and our work to bring more research funding into the College. As I have said before, there are high expectations for

Engineering and Technology as a driver of externally-funded research at ECU. Our faculty and students are clearly stepping up to the task and I have been very pleased to see the increased productivity in these important areas. Our faculty and staff are so dedicated to maximizing our students' successes and leading the transformation of our region.

I hope you enjoy this edition of our newsletter and I hope you continue to support this great College. We are an extremely important part ECU and we will continue to deliver on our success. Please consider supporting the College. We need more scholarships and other support for our students and faculty. Help us tell the story of ECU and the College so more and more great students will come to us!

I hope you have a wonderful Holiday season!

- David M. White, Dean



*David White, Dean
College of Engineering
and Technology*

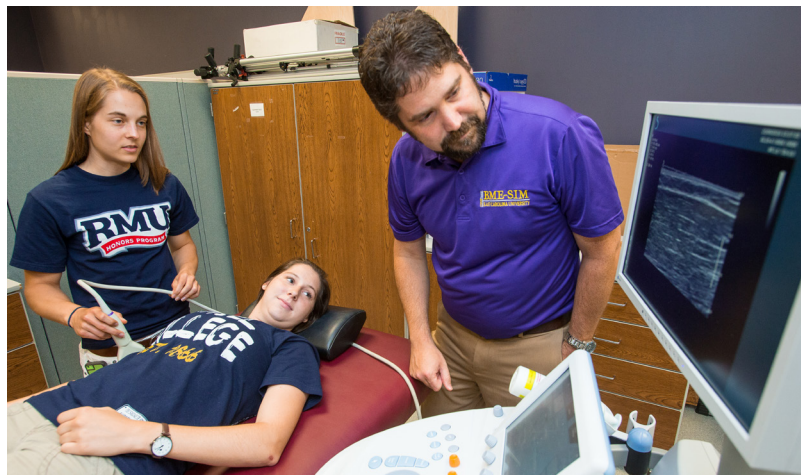
Program Brings Students from Across the Country to ECU

Undergraduates from colleges across the United States are working on research projects alongside East Carolina University students this summer in two 10-week programs supported by the National Science Foundation.

The Research Experience for Undergraduates, or REU, offers research in computer science and biomedical engineering. Classes are held in the ECU College of Engineering and Technology and the College of Health and Human Performance.

The highly competitive program runs through July 29. This year, 102 students from around the country applied for 10 computer science spots while more than 227 students applied for nine seats in biomedical engineering.

"I wanted a way to apply my background in mathematics to something very practical like software and computer science and I thought



REU students use ultrasound to study arm movements. Dr. Zachary Domire, associate professor in the ECU Department of Kinesiology, works with Jennifer Rickens, an undergraduate student at Thiel College, on table, and Kylee Schaffer, a Robert Morris University student. Rickens is getting a muscle ultrasound. (Photo by Cliff Hollis)

this would be a good experience for me in research," said Elon University senior Nathan Pool.

Pool is one of 10 undergraduates involved in software testing and analytics in the computer science REU.

Across campus, nine students are conducting biomedical engineering research using simulations, imaging,

and modeling. Topics range from performing and studying ultrasounds of muscle movement in the arm to analyzing magnetic resonance imaging or MRI of the pulmonary artery to investigating how parts of the brain communicate with each other.

"I love all of the new information and new experiences that I have, especially with neuroscience," said Temilade Aladeniyi, who is a junior biology major at North Carolina Central University in Durham. "I did not think I'd be coming to an engineering undergraduate research program and be doing neuroscience."

Although the students change from year to year, some of the research expands on previous projects, according to Dr. Stephanie George, ECU assistant professor of engineering and one of the program organizers.

"Some (research projects) are building year after year with the REU

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New Scholarship Continues Retiring Professor's Desire to Help Students

A retiring East Carolina University professor known for changing lives is being honored through a new scholarship that will continue his legacy.

Dr. J. Barry DuVall will retire this month after 32 years as a professor in the Department of Technology Systems in the College of Engineering and Technology.

DuVall's former student and ECU alumnus Timothy Gomez created the Dr. Barry DuVall/Timothy M. Gomez Teacher's Choice scholarship to help future ECU students realize their dreams. Industrial technology students William Koch and Gregory Parrish received the first scholarships this fall.

"The recipients are students who cannot dedicate 100 percent of their time to studies, and this is one way that we're able to help better their lives so they can focus on their education, like Dr. DuVall did for me and many others," said Gomez '92 '95.

"He made us be everything we could be, and he wouldn't settle for anything less," Gomez said. "After 50 years of riding students like me, there's many of us out there that owe our lives to him, and for me personally, he changed my life."

Gomez is CEO of Dixon Ticonderoga, one of the oldest manufacturers of writing instruments, arts and crafts and fine art products in the United States. But 25 years ago, Gomez was a struggling ECU student from northeastern North Carolina who didn't have very good grades because he was working 60 hours a week to make ends meet.

That all changed, he said, after DuVall approached him about graduate school. Gomez said DuVall helped him get into graduate school and a grant program that allowed him to focus on school instead of having to work all the time.

"My master's degree grades were straight A's," Gomez said.

Another former student, Mike Putnam '98 '00, said DuVall's impact is everlasting.

"Dr. DuVall mentored each student as though he had stock in their future career," said Putnam, president and CEO of Sequence, a quality and compliance consulting firm in Raleigh.

"He went well beyond teaching technical content. Dr. DuVall taught the intangibles every employer desires in a candidate, whether it was a proper handshake, the importance of eye contact or the value of self-confidence."

DuVall said he came from a family of teachers, with his parents, aunts and uncles being in the profession. He received undergraduate and graduate degrees from Indiana State University,



From left to right: William Koch, Gomez, DuVall, Gregory Parrish and his daughter Marley pose after the awards ceremony. Koch and Parrish are the first recipients of the Dr. Barry DuVall/Timothy M. Gomez Teacher's Choice scholarship.
(Photo by Dixon Ticonderoga Company)

where he worked in the print shop with graphic arts. DuVall taught at several universities before coming to ECU in 1984. A decade later, he was on the forefront in teaching online classes.

"I have had one of the greatest jobs in the world. That's because technology is always changing, there are always opportunities for improvement, and my students are working professionals who are results-oriented and make it all worthwhile." DuVall said.

In September, Gomez picked up

DuVall in a limousine and took him to the College of Engineering and Technology's annual Robert E. and Betty S. Hill Recognition of Excellence Awards Ceremony. There, DuVall was presented with the J. Barry DuVall Lifetime Achievement Award.

"This was a surprise for me, that's for sure," DuVall said. "I just would never, ever anticipate anything like that. ... That's wonderful, you know."

Dr. Tijani Mohammed, chair of the ECU Department of Technology Systems, said it is nearly impossible to narrow DuVall's impacts and contributions into a few sentences or even an article.

"Dr. John Barry DuVall is a legend... He will forever be remembered as one of the greatest technology teachers, a great colleague, a sincere friend and a caring mentor who offered unconditional support to everyone around him without any expectation of anything in return," Mohammed said. "People like Dr. DuVall are very rare and to say that he will be sorely missed in our department and the university will be a gross understatement."

DuVall's email signature includes a quote: "I am here to help those who help themselves. Forge on!" Those who know him best agree that DuVall helped many students get all they could from their time at ECU.

"You just never know what to expect when you work with others," DuVall said. "I could tell though that some of those people have the spark in the eye and the energy and enthusiasm. He (Gomez) was like that. And that always makes it worthwhile. That's why I've done it (teaching) so long."

Gomez said he wants students who come to ECU to know about DuVall, and he will make sure that happens through the Teacher's Choice scholarship. Gomez plans to award four scholarships to technology systems students with demonstrated financial need in 2017, and will grow the fund from there.

"I love this man," Gomez said. "As humble as he is, he deserves to retire in this way."

*- Rich Klindworth,
ECU News Services*



PIPELINES BRING PROGRESS

University Strives to Provide Opportunities for all Students

East Carolina University has a lot to be proud of in terms of the opportunities it provides for students from all backgrounds, but administrators say there is still work to be done.

Dr. Wayne Frederick, president of Howard University, visited ECU on Nov. 7 to tour the campus, meet with administrators and give a presentation on Advancing Diverse Pipelines in STEM, Medicine and Health.

Frederick highlighted the importance of training doctors from minority populations, pointing out that they are most likely to return to those communities to provide care. He provided a historical background, explaining that prior to a 1910 report by Abraham Flexner, there were seven medical schools for black students.

Flexner's report had a marked negative impact on those schools; the number decreased to two. Between 1920 and 1964, Frederick said, only 3 percent of students entering medical school were black, and today, that number still lags behind the representation of blacks in the general population.

Historically black colleges and universities (HBCUs), Frederick said, play an important role in training minority physicians, but he complimented the efforts of the Brody School of Medicine, which has a higher percentage of black students than the national average. Nationally, only 6.3 percent of 2016 medical school graduates were black, according to the American Association of Medical Colleges; Brody's percentage was 11.7.

"African-Americans who graduated from high school last year, a greater percentage of them enrolled in college than their white counterparts for the first time in the history of this country," Frederick said. "So African-Americans want to go to college, that's not an issue. Resources clearly are an issue, and I think that's where we have to bridge the gap. It's not an issue of desire."

He discussed the role of implicit bias in medical training and care, and the importance of mentorship. Society has an issue with where it sets the bar for minority youth, especially African-American males, he said.

"There is nothing like instilling confidence. ... Their mindset is extremely different once they



Students and faculty attended a presentation by Dr. Wayne Frederick, president of Howard University, on the topic of diversity in the health care field. (Photo by Cliff Hollis)

have that confidence embedded in them, and that's what we don't give African-American males in this country," Frederick said. "They're not getting confidence from the home environment, and they're not getting it from all of us around them. We are not saying to them, on a consistent basis, you can be whatever it is you want to be."

One way to help instill confidence and teach young people about their options is to expose them to STEM (science, technology, engineering and math) and health care fields. ECU's School of Dental Medicine has programs each year to do just that, said Dr. Margaret Wilson, vice dean and associate dean for student affairs at the school of dental medicine.

"We have a two-and-a-half-day program called Preparing Tomorrow's Dentists, which is for students who align with the mission of our school - students from underrepresented minorities, rural areas and disadvantaged backgrounds," she said. "The program includes learning more about dentistry as a career, and they have a chance to learn about the application process, learn how to write a good personal statement and talk about resources for preparing for the dental admissions test."

The program includes hands-on activities such as performing cavity preparations in a simulation lab, working on mannequins and bending orthodontics wire. It takes place within two and a half days in the summer, so

students with jobs or other summer programs can still participate. A shorter, but similar, one-day program is held on a Saturday in the fall or spring at a private pediatric dental office in Burlington.

ECU's dental school also recruits students from colleges and universities throughout the state, including HBCUs, and offers scholarship for students from disadvantaged backgrounds through a grant from the U.S. Department of Health and Human Services. The school's eight community service learning centers in rural areas are another means of providing care while also exposing members of those communities to the possibility of a career in dentistry.

"One thing we know is that people from disadvantaged backgrounds, people from rural areas and people from minority groups are more likely to provide care for people in those groups, so it's important for us to develop a diverse oral health care workforce," Wilson said.

The dental school's efforts have led to a student body made up of more than 25 percent minority students, significantly higher than the national dental school average of about 14 percent.

Overall, ethnic minorities make up 25 percent of all ECU students as of fall 2016.

There are also undergraduate programs at ECU devoted to recruiting a diverse student body, including

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ECU Team Competes in National Robotics Competition

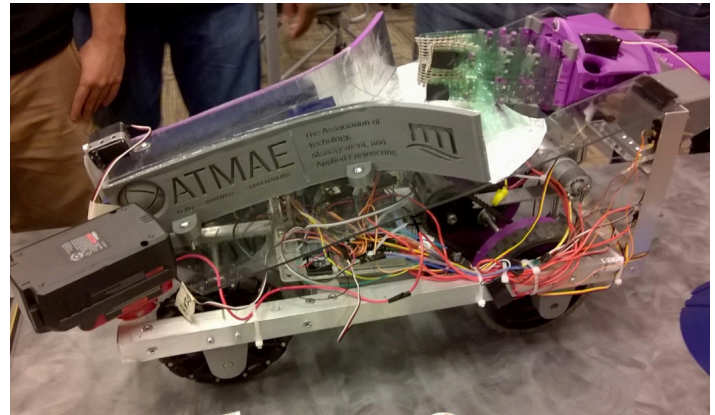


Team members from a competing team examine the ECU robot on display.

East Carolina University's Association of Technology, Management, and Applied Engineering robotics team took third place at the national ATMAE Conference held Nov. 2-5 in Orlando, Florida.

Led by Zack Cleghorn, an industrial engineering technology student, the team worked from August until October on the ECU robot. Other team members were David Palmieri, Oliver Chen, Cameron Coleman, Chance Smitherman, Luke Pearson, Kyle Marchland, Samuel Saunders and Josh Stevens.

Faculty members Amy Frank, teaching instructor in technology systems, and Dr. Jimmy Linn, teaching assistant professor, accompanied the team made up of industrial engineering technology, computer science and technology management graduate students. It was the first time many of the students had worked on a project requiring extensive wiring, programming and design decisions.



A close-up of the finished ECU robot. Several parts were made using a 3D printer.

The robot had to complete two major circuits at the competition. The first consisted of a burlap bridge, a teeter totter and an automation segment where the robot had to collect five cubes and store them. The second circuit was a relay race in which the robot had to sprint down and collect irregular shaped blocks and return to the starting point. During the competition, the robot experienced a few minor automation failures over the burlap bridge, but was able to complete the teeter totter successfully for both passes.

One of the best features of the robot was its secondary inner wheels, which were 3D printed by Stevens. The wheels were adapted using riveted spokes to help pull the robot over the burlap bridge. With several infra-red sensors, an ultrasonic sensor and an Xbox controller, the robot sprang to life for the automation segment.

With an aluminum frame, the robot only weighed 25 pounds.

For more information on ATMAE and the robotics team, contact Frank (franka@ecu.edu) or Linn (linnj@ecu.edu) in the Department of Technology Systems.

-Chance Smitherman, ECU robotics team member

PIPELINES, CONTINUED FROM PAGE 5

programs that expose female students to careers in STEM fields. One example is the College of Engineering and Technology, which regularly reaches out to middle and high school students in the region.

"Our industry partners stress their need for a diverse engineering and technology workforce," said Dr. David White, dean of the College of Engineering and Technology.

"Our popular STEM Girls program exposes eighth-grade girls to various STEM degrees offered at ECU," he said. "This program will be replicated at several community colleges in

our region this spring. We also host summer experiences that focus on underrepresented groups such as our Engineering and Technology Academy for girls."

White said there is also a student-led effort funded by a grant from Google to encourage high school girls to study computer science.

"The need to grow a diverse pipeline is always at the forefront of our recruiting efforts," he said.

Last year, ECU and the University of North Carolina at Pembroke launched a partnership to increase the number of physical therapists working in eastern

North Carolina.

The goal of that program, said Dr. Amy Gross McMillan, associate chair of the Department of Physical Therapy, is to recruit students from Robeson County and surrounding areas who would likely return to serve that area. UNCP is committed to serving students of Native American heritage and other minorities, and the program, still in its infancy, could help bring more of those students to ECU's health sciences campus.

*-Jules Norwood,
ECU News Services*



FACULTY HIGHLIGHTS

Dr. David Batts, associate professor in the department of Technology Systems, was selected to receive the Outstanding Chapter Advisor Award from the Phi Sigma Pi Honor Fraternity. Batts was honored at the 100th year celebration and convention in Kansas City, Mo in July. Phi Sigma Pi is a coed honor fraternity that was started on ECU's campus in 1936. Batts has been the faculty advisor since 1997 and this is the second time he has won the award. Batts also received the Faculty Advisor Award of Excellence by the Professional Fraternity Association in 2007 and Advisor of the Year award by ECU in 2006.

Dr. Mike Behm, professor in the department of Technology Systems was recently appointed to the National Institute for Occupational Safety and Health (NIOSH) Board of Scientific Counselors. Behm is a representative of the American Society of Safety Engineers (ASSE) on the board. The committee is responsible to provide advice on NIOSH's occupational safety and health research and prevention program. They also advise on standards of scientific excellence, current needs in the field, and the applicability of research findings in industry. Behm will serve a two year term beginning January 2017.

The Job-Site Safety Institute (JSI) recently awarded the construction management department \$44,636 for the research project titled "Implementing a Peer Mentoring Program for Safety Improvement."

Dr. Donna A Hollar, assistant professor in the construction management department and the principal investigator, said the grant's aim is to

address the inconsistent transfer of safety knowledge from organizational policies and procedures to field workers, especially Hispanic workers on the jobsite. The twelve month investigation will begin in July 2016. JSI was founded by Builders Mutual Insurance Company (BMIC) and seeks to eliminate or reduce all job-site related injuries and fatalities through research, education and collaboration with industry partners. They serve as a research center where educational institutions and industry leaders can collaborate to increase awareness of dangers of a construction site.

Dr. Venkat Gudivada, department chair for computer science, recently co-authored an edited research monograph titled *Cognitive Computing: Theory and Applications* in the *Handbook of Statistics*.

Dr. Ranjeet Agarwala, assistant professor in Technology Systems, and **Dr. Tarek Abdel-Salam**, professor in Engineering and associate dean for research and graduate studies, received a grant from Constellation, titled E ∞ Energy to Educate grant. The program is for student projects focusing on energy science, technology, and education. This project will educate and inspire students on the significance and societal benefits of sustainability and renewable energy in the preservation of environment and natural resources through a hands-on solar technology project. Around 150 students from the College of Engineering and Technology (CET) will partner with International Green Construction Code (IGCC) to develop and deploy renewable energy sustainable systems with a goal to build

a net zero energy facility.

Dr. Randall Etheridge, assistant professor in engineering, was recently funded by NSF with a project titled "Eager: Investigating Drivers of Stormwater Flooding in Coastal Communities: A Citizen in Science Project." The project will investigate the coastal communities on Bogue Banks that frequently experience flooding after significant precipitation events. Etheridge will work with town managers to employ engineering solutions to alleviate the effects of stormwater flooding events using both scientists and citizens for data collection.

Dr. Tarek Abdel-Salam was also funded by NASA/North Carolina Space Grant to support two student design competition teams. The first student team will be participating in the American Institute of Aeronautics and Astronautics (AIAA) student "Design Build Fly" competition. The second team will be participating in the American Society of Mechanical Engineers Student Design Competition (ASME-SPDC).

Dr. Evelyn Brown, associate professor in engineering, spoke at a conference titled *STEM Conversations, Outreach and Education* at the University of New Mexico in October. Brown spoke about her experience with the ECU S-STEM program titled Expanding Engineering in Eastern North Carolina (E3NC) which provides support for FAFSA eligible students from eastern NC, and STEM Girls, an outreach program that brings local eighth grade girls to campus for a one day STEM conference.

STUDENT HIGHLIGHTS

Several computer science students were recently awarded funding for a prestigious award titled IgniteCS, which is a Google initiative available only to students. The purpose of IgniteCS is to grow the field of computer science.

Matthew Bent, Sever Thorn, Jakayla Alston, Tiffany Nguyen, and Maysun Dietrich, all undergraduate students, were funded to work with three local high schools to attract more young minds into the computing field. The students, under the supervision of **Dr.**

Venkat Gudivada, department chair and professor of computer science, will work with computer science teachers in Pitt County and help develop instructional materials and engaging computer projects.

Noah Sonne, an engineering student under the leadership of **Dr. Teresa Ryan**, assistant professor in the department of engineering, was awarded the Robert W. Young Award for Undergraduate Student Research in Acoustics. Sonne was funded to further

his undergraduate research titled "A Study of Complex System Dynamics: Metronome Synchronization." His research will be presented at the Acoustical Society of America conference next summer in Boston, MA.

Gurnoor Sangha, biomedical engineering student, was awarded 1st place in the 3rd Annual Career Services Internship Photo Contest for her work at the ECU Innovation lab with 3D printing.



PROGRAM, *CONTINUED FROM PAGE 3*

students. Others are newer projects that are just starting up. Some are building on graduate student projects," said George.

At summer's end, students will submit an abstract to the biomedical engineering society and present their findings at the group's annual fall meeting, George said.

"A lot of undergraduates don't have that opportunity even at the larger institutions, so for these students coming from smaller schools, I think it's a really good opportunity for them," she added.

ECU senior John Dixon took part in the computer science REU last summer. Later, he presented his findings at a symposium in Washington, D.C.

"The people at the symposium, I'm meeting people from MIT, I'm meeting people from Stanford, I'm meeting people from all sorts of great universities and maybe they haven't heard of East Carolina University

before, but on this big stage in front of everyone, they were talking about ECU there," he said.

Dixon said the program opened his eyes to what he could do in the future.

"If I hadn't participated in the REU, I probably wouldn't have been exposed to any type of research, and it gave me a great opportunity to get my feet wet," Dixon said. "I'm now seriously considering getting at least a master's degree, if not a Ph.D., because of the fact I found the research very interesting."

The REU allows ECU to showcase its graduate programs to potential students. "It will definitely help us promote our program and attract talented students," said Dr. Junhua Ding, ECU associate professor of computer science.

Six of 10 computer science students and seven out of nine biomedical engineering students are from other universities.

"I'm getting a really good feel of the campus and the people here and I'm loving it and all the opportunities I'm given, so I think that's a possibility that I could end up coming here for grad school," said Wichita State University junior Alex Deghand.

The computer science program was recently funded for a second three-year term after starting in 2013. George plans to apply in August for an additional three years for the biomedical engineering REU. Participating students are paid a \$5,000 stipend, receive a housing allowance and meals. They also are reimbursed for travel if they live outside North Carolina.

"It's probably one of the best opportunities undergraduates have," Dixon said.

*- Rich Klindworth,
ECU News Services*

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