GEORGIA TECH

ENGINEERS

Vol. III, Issue II

Spring 2016

Women in Engineering

Mission Statement

Georgia Tech Engineers strengthens the bonds between CoE's students, faculty, staff, alumni and friends by sharing the stories that link them. CoE is Georgia Tech's largest college, and Georgia Tech Engineers promotes a sense of community among its diverse members. While the magazine showcases research and study, it also focuses on the people behind those endeavors, reminding everyone in the College what makes it exemplary.

BEN WRIGHT

Dear Friends of the College of Engineering,

After eleven and a half years of fundraising, Georgia Tech recently completed the biggest capital campaign in its history. I am grateful to the donors whose gifts allowed the College of Engineering to raise over $500 million during Campaign Georgia Tech. Even as an engineer, I have to pause when I try to grasp those numbers. Maybe it is because I understand the real value of each dollar given.

The alumna who took her engineering education to greater things in her field or community; the company that likes to work with our faculty and hire our students; the friends of the college who have benefitted from our research; and even current students — all gave knowing that they are paying forward the gift of education. These gifts, from the smallest to the largest, represent a tangible connection to the College.

Your continued support has ensured that many items on the wish list have been addressed — scholarships, new faculty chairs, research support — but a major goal still remains: naming the College of Engineering. Such a transformational gift would ensure that an engineering education from Georgia Tech is second to none. Not only would it allow us to support our students in new ways, but it would provide for an infusion of facilities, programs, and research support to ensure we remain one of the very top engineering colleges in this country.

While that item remains on the wish list, we will use the gifts already provided to the College to augment the extraordinary education and research found here. What we do today will have a lasting impact on tomorrow. The support shown for our programs has been humbling and inspiring. On behalf of our students, faculty, and staff, I thank you for all you do for the College of Engineering.

Gary S. May

Dean
Southern Company Chair

Deciding to dedicate a magazine issue to women in engineering was easy, but figuring out the best way to do it was not. That isn't to say that we had trouble finding female engineers with thoughtful, interesting and sometimes funny stories to tell. The challenge was in striking balance.

We wanted to highlight the women's achievements and celebrate them for their own merits — not because they are women engineers but because they are excellent engineers. At the same time, there is still a dearth of women in many STEM professions, and many of these women face professional challenges that their male peers may not. Even at Georgia Tech, women still make up just a third of engineering students.

Ultimately, we reasoned, the best way to approach the topic was simply to feature as diverse a group of women as we could and allow them to speak for themselves. Some discuss struggles they have encountered; almost all mention their commitments to engineering and love for Georgia Tech. Keeping in mind that women are not the only underrepresented group in STEM fields, we also worked to feature people of various backgrounds and ages here as well.

In the next issue of this magazine, you'll read about how philanthropy touches almost every face of the college, including efforts to boost diversity. But first, we wanted to give you some examples of why, even in 2016, these efforts are still necessary. There are not enough women in engineering, but as you'll read in this issue, the ones who are already here are invaluable.

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GEORGIA TECH
ENGINEERS

Georgia Tech Engineers is published semiannually by the College of Engineering at the Georgia Institute of Technology.

Vol. III, Issue II • Spring 2016

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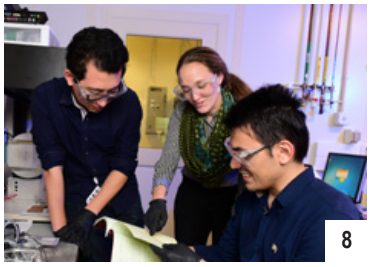
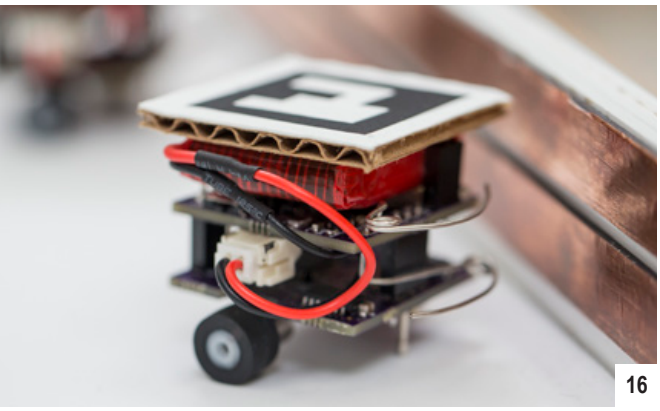




FEATURES

DEPARTMENTS

DEPARTMENT GUIDE

Here's a look at some of the sections you'll see in this issue of Georgia Tech Engineers and others:

SYLLABUS
CoE programs span a broad array of disciplines. In Syllabus, we spotlight one of the College's programs or people.

BRIGHT IDEAS
Learn about the innovations that define engineering at Georgia Tech.

GOING GLOBAL
Our engineers work around the world, and we chronicle their successes here and abroad.

FIRST PERSON
A member of the CoE community speaks in his or her own words.

MAKING IT HAPPEN
We look at how CoE alumni turn their lofty ambitions into reality.

LAST WORD
Just one more thing...

AE Alumnus Named Black Engineer of the Year

Georgia Tech aerospace engineering (AE) alumnus Christopher Jones has received the 2016 Black Engineer of the Year Award, given by Black Engineer magazine.

Jones, AE '86, is the corporate vice president and president of Northrop Grumman's Technical Services sector.

"My experience at Georgia Tech, where I obtained my degree in aerospace engineering, was critical to my personal development," he said.

"Through the years I have remained focused on achieving technical excellence. Additionally, at every stage of my career, maintaining good relationships with people from high school and college to the Air Force and other companies has been important. All of these experiences matter and make you a more competent leader."

In 2015, Jones, a former ROTC student at Tech, was inducted into the College of Engineering Academy of Distinguished Engineering Alumni.

– Kathleen Moore

GARY MEEK

RAFTERMEN PHOTOGRAPHY

Gerhardt Named Goizueta Foundation Faculty Chair

Rosario Gerhardt, professor in the School of Materials Science and Engineering (MSE), has been named Georgia Tech's new Goizueta Foundation Faculty Chair.

The Goizueta chair position is awarded to outstanding tenured faculty who have demonstrated excellence in research and teaching, as well as leadership in the campus Hispanic community and beyond.

"It's exciting to me to be able to share my story with people," said Gerhardt, who was born in Peru and had the experience of being an international student when she came to the U.S. for college. She studied and worked at Carroll College, Columbia University and Rutgers University before coming to Tech as an associate professor in 1991.

In the interim years, she was granted tenure and later promoted to full professor in MSE. In her academic work, she has published more than 200 papers, garnered more than $5 million in research funding, and has personally advised and mentored more than 100 people. Her scientific research focuses on determining the underlying structure of materials and how that structure affects a given material's electrical, optical, and magnetic response.

Funding is provided to the Goizueta chair for academic and research activities and to support efforts related to service as a role model for Hispanic students.

– Kristen Bailey

Researchers Develop Framework for Value-Based Pricing of Cancer Drugs

GARY MEEK

At a time when cancer drug prices are rising rapidly, a new study recently published in JAMA Oncology provides the framework for establishing value-based pricing for all new oncology drugs entering the marketplace.

Using a sophisticated economic model, Assistant Professor Turgay Ayer (of the Stewart School of Industrial and Systems Engineering) and Ph.D. student Qiushi Chen, along with researchers at Winship Cancer Institute of Emory University, used an example of a new lung cancer drug.

Researchers focused their investigation on a drug called necitumumab, an experimental lung cancer drug made by Eli Lilly & Co. The drug is awaiting approval from the Food and Drug Administration, and Eli Lilly has not set a price yet. The researchers used their economic model to factor medication and administration costs with life expectancy, frequency and management of adverse effects, and quality of life. The results demonstrated that the value-base price for necitumumab ranges between $563 and $1,309 per three-week cycle, a significantly lower cost than most cancer drugs that have entered the marketplace recently.

Although the study determined pricing for one specific drug, the analysis conducted establishes a model by which other cancer drugs can similarly be assessed in the future to develop value-based prices. The study concludes: "There is currently a crucial step in the drug development and approval process that is missing — an evaluation of cost and value."

– Emory Health Sciences

Dual Degree Option Lets Students Combine MBA with M.S. or Ph.D.

Georgia Tech is now offering a dual degree option that allows students to combine an MBA with an M.S. or Ph.D. in programs within the College of Engineering and College of Computing. This interdisciplinary degree track will provide graduates with the technology knowledge, analytical skillset, business acumen, and entrepreneurial mindset to propel them to the forefront of their chosen fields.

The MBA dual degree leverages the combined strengths of Georgia Tech in engineering, computing, and business by melding the expertise of the College of Engineering's School of Electrical and Computer Engineering, Guggenheim School of Aerospace Engineering, Stewart School of Industrial & Systems Engineering, Woodruff School of Mechanical Engineering, the College of Computing's School of Computer Science, and the Scheller College of Business. By combining the strengths of these nationally ranked programs, students gain a unique blend of skills and a competitive advantage to accelerate their careers.

The dual degree option allows students to count 15 credit hours from their M.S. or Ph.D. courses toward their MBA elective requirements, reducing the time required to complete both degrees. Thus, students can complete an MBA with 39 credit hours instead of 54 credit hours.

Students who have been admitted to an M.S. or Ph.D. program in the Georgia Tech College of Engineering or College of Computing (excluding online degree programs) are eligible to pursue the dual degree option.

– Georgia Tech Communications

NSF Funds $12 Million Research Network to Envision Cities of the Future

A new National Science Foundation-funded research network will connect scientists at nine universities with infrastructure groups, public policy experts, and industry partners to reimagine cities.

Georgia Tech will be an anchor of the $12 million dollar network, which will be led by the University of Minnesota, and School of Civil and Environmental Engineering professor Ted Russell will serve as a co-director.

"We're bringing some very different communities together more than past projects have done," Russell said. "We are getting the engineering community, the health community, the atmospheric sciences community, the economics communities, the policy communities in the same virtual room to look to the future."

The idea is to reimagine infrastructure — energy grids, road networks, green spaces, and food and water systems — to create cities that are highly functional, promote the health of residents and the environment, and have that intangible "vibe" that makes them desirable places to live and work.

The four-year project will use cities across the United States and in India as "test beds" for its work, a unique approach that Russell said means the outcome of the network's studies will have significant impact. Atlanta is one of those cities.

"One of the points we made with this proposal is that it's action-oriented, with the idea that the output of this project is not papers, it's actually actions," he said. "[We will] not only specify what actions might be taken but actually help realize those actions."

– Joshua Stewart

FITRAH HAMID

GARY MEEK

ECE's Anthony Yezzi Heads to Italy On Fulbright Award

Anthony J. Yezzi has been offered a Fulbright U.S. Scholar Program grant to Italy, the Department of State and the J. William Fulbright Foreign Scholarship Board announced recently.

Yezzi, who holds the Julian T. Hightower Chair in the School of Electrical and Computer Engineering (ECE), is one of more than 1,200 U.S. citizens traveling abroad for the 2015-2016 academic year through the Fulbright U.S. Scholar Program, the flagship international exchange program sponsored by the U.S. government. Recipients of Fulbright grants are selected on the basis of academic and professional achievement.

From February through June 2016, Yezzi will be hosted within the Department of Chemical, Industrial, Computer, and Mechanical Engineering at the University of Palermo in Italy. While at the University of Palermo, Yezzi will work on a project called "Geometric Partial Differential Equations for 3D Surface Reconstruction."

– Jackie Nemeth

Georgia Tech Welcomes Three GRA Eminent Scholars

Georgia Tech has announced the appointment of three new Georgia Research Alliance (GRA) Eminent Scholars — Deepak Divan, Stanislav Emelianov, and Ravi Kane (left to right) — bringing the Institute's total of GRA Eminent Scholars to 22.

The GRA Academy of Eminent Scholars numbers 63 and, in 2014, was responsible for generating more than $300 million in competitively funded research activity. GRA Eminent Scholars employ some 1,200 faculty, graduate students, and technicians in their labs.



PHOTOS COURTESY BME, CHBE & ECE COMMUNICATIONS

Ravi Kane has joined the School of Chemical & Biomolecular Engineering as a professor and holder of the Garry Betty/V Foundation Chair and GRA Eminent Scholar in Cancer Nanotechnology. Kane will hold also program faculty status in the Wallace H. Coulter Department of Biomedical Engineering (BME) at Georgia Tech and Emory University.

Deepak Divan has been appointed as the John E. Pippin Chair Professor in the School of Electrical and Computer Engineering (ECE) and as a GRA Eminent Scholar. In this new role, Divan will also serve as director of the Georgia Tech Center for Distributed Energy.

Stanislav Emelianov has been appointed as the Joseph M. Pettit Chair in Microelectronics and as a GRA Eminent Scholar. He is based in ECE with a joint appointment in BME.

– Brad Dixon, Jackie Nemeth, Walter Rich

Bellamkonda Named Dean of Duke Engineering

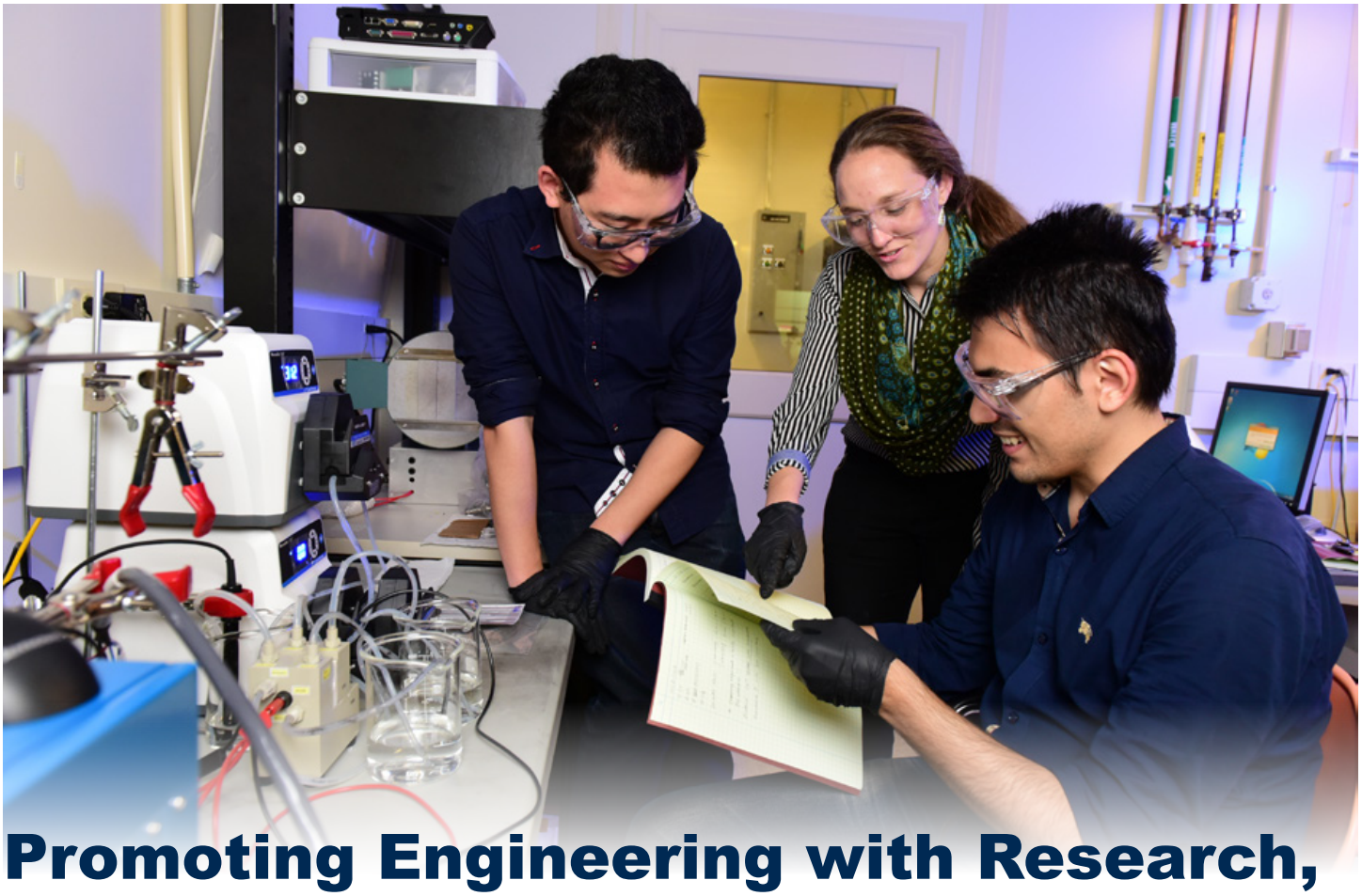
GARY MEEK

Ravi Bellamkonda, chair of the Wallace H. Coulter Department of Biomedical Engineering (BME) at Georgia Tech and Emory University, has been appointed the new Vinik Dean of the Pratt School of Engineering at Duke University, effective Aug. 1.

"This is a prestigious appointment, and we congratulate Ravi on being named dean of engineering at Duke," said Gary S. May, dean of engineering and Southern Company Chair at Georgia Tech. "I look forward to continuing to work with him in different capacities at the regional and national levels. He has done a phenomenal job as chair of the Coulter Department."

As chair of BME since 2013, Bellamkonda has helped develop programs to sustain deep student learning and entrepreneurship at the undergraduate level. He also directed a training grant on the Rational Design of Biomaterials, initiated a novel graduate leadership program for bioengineering graduate students, and is co-principal investigator for the Emory-Georgia Tech-Morehouse College Clinical and Translational Science Award grant.

– Kay Kinard



GARY MEEK

Promoting Engineering with Research, Teaching and Girl Scout Badges

New assistant professor Marta Hatzell aims to get young people interested in her field.

by Lyndsey Lewis

Just before 8 a.m., the scene in Marta Hatzell's thermodynamics class is as you might expect.

There are perhaps a dozen students present, some slumped in their chairs and a few others tapping on their smartphones. The lecture hasn't begun, but the room's silence seems to say that everyone would relish a few more hours of sleep.

The only noise is the sound of Hatzell's marker on the whiteboard as she scribbles equations. She arrived at Georgia Tech in August, making her one of the newest assistant professors in the Woodruff School of Mechanical Engineering.

Did she end up with this class, a thermodynamics lecture given while the morning light is still breaking, because she's so new to Tech? (Perhaps an unspoken rule: "Newbies get the half-asleep freshman sections.")

Nope — she requested this time. And once you get to know her, you understand why.

"When you're starting" in academia, she explains, "you're juggling a bunch of balls, and the idea is not to drop any of them."

As an assistant professor still on the cusp of her career, Hatzell knows a lot of work lies ahead of her. Carving an

academic reputation takes time, but she is invigorated by the idea of it. In a way, her personality seems ideally fitted for her line of work: The self-described morning person is disciplined and routine-oriented in her own life (she assigns herself specific tasks for almost every hour of her workday), but she's eager to share engineering's excitements and rewards with others.

Her research has lofty ambitions. In her lab, she studies sustainable electrochemical conversion systems. The idea is to convert waste into usable products in ways that are more efficient than current ones.

Energy systems, she points out, have reached a turning point. There is more emphasis on reuse, and in her lab, Hatzell puts special focus on water-reuse projects. For example, minerals and metals can be recovered from water streams and put to new purposes.

"This idea of sustainability has been around for a long time," Hatzell says, "but it's beginning to be further refined when applied to engineering and technology."

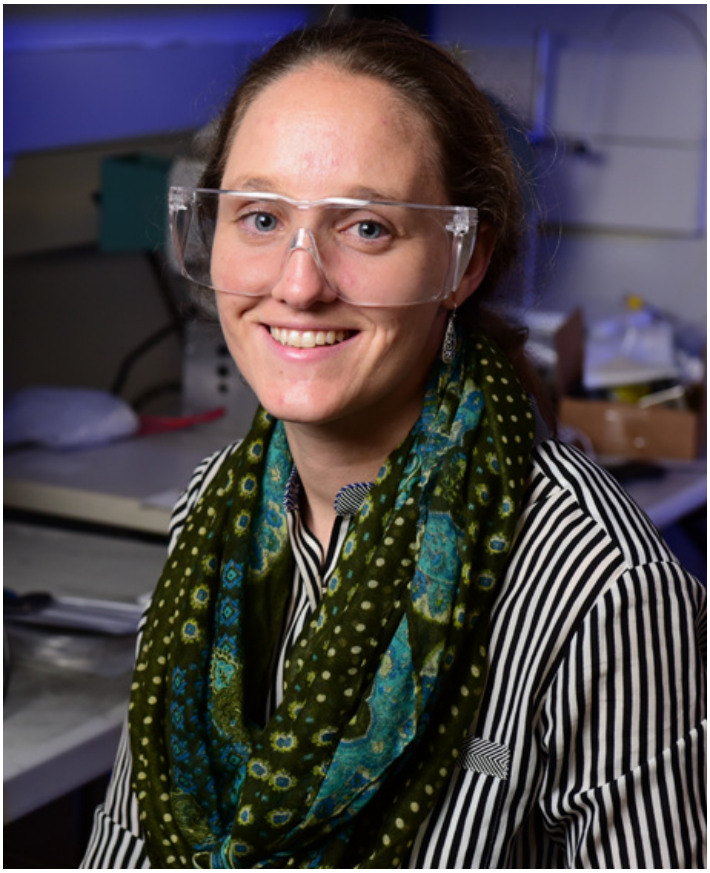
Water is typically viewed as an environmental engineering concern, but her focus on thermodynamic processes makes Hatzell a mechanical engineer. More than even some other engineering specialties, mechanical is a male-dominated field, so Hatzell has spent years encouraging girls and women to explore it.

She had an advantage here, because she completed both her undergraduate and graduate studies at Pennsylvania State University. There, she worked with local Girl Scouts on science projects, and being in one place for so long allowed her to watch some of the girls grow up and pursue their own college majors in engineering.

More than even some other engineering specialties, mechanical is a male-dominated field, so Hatzell has spent years encouraging girls and women to explore it.

She also found mentorship for herself through Penn State's Women in Engineering Program, and now that she's at Georgia Tech, she wants to give students here that same support. It's another commitment for her already packed schedule, but she likes staying busy.

Too many people claim to be "passionate" about their work, but the word applies well to Hatzell, who looks forward to catching up on dense scientific literature every afternoon.



GARY MEEK

"You never dread going to work," she says. "Every day I'm excited."

Her office is still sparsely decorated, save for a few gifts from former students. There's also a coffeemaker in the corner; one of her few disappointments with Georgia Tech is that there aren't many places to buy coffee near her office.

She's taking her job one day at a time, and she's looking forward to becoming more creative as both a researcher and teacher. In the meantime, she tries to excite all her students about engineering — even when some of those students might still have sleep in their eyes.

In her 8 a.m. class, she is animated when discussing the Stirling engine, typically beloved by engineers because the engine has the potential for high efficiency with reduced emissions.

"If you meet a thermodynamist," she tells her class, "and you want to strike up a conversation, just talk about the Stirling engine!" A few chuckles from the room; a few confused faces. Hatzell smiles, undeterred.

"Just something to remember," she says, and she continues teaching. ▪

Finding Rewards, Challenges and Inspiration in a Tech Ph.D.

Janille Smith-Colin advises girls to embrace their talents in science and math.

by Janille Smith-Colin

The experience of a graduate student at Georgia Tech is somewhat different from that of an undergraduate student. Graduate students do not learn the fight song on day one. We are not regaled with stories of Georgia Tech's favorite student upon our arrival, taught the history of the steam whistle, or forced to make the rite of passage up Freshman Hill.

Exposure to these elements of Tech's culture happens for us over time, as we delicately navigate the demands of our research labs and the pride of being a Yellow Jacket. Graduate students are, however, not spared the personal, professional, and academic challenge of the Georgia Tech experience. Like all other students, we feel this on day one!

I am a 4th year Ph.D. student at Georgia Tech, and over the course of my academic career have been privileged to attend a small liberal arts college and a public land-grant university in pursuit of my undergraduate and graduate education. Earlier this year, however, as I once again balanced the many demands of the Tech lifestyle, I had to quietly admit that I was being challenged at this point in my life in ways that I never had been before. The Georgia Tech experience is not purely an academic one. In fact, as a Ph.D. student, I've learned that the demands of the classroom (and trust me, I do not envy the plight of undergraduate students) sometimes pale in comparison to the demands outside the classroom: research, mentoring, grading, teaching, and often, grant writing.

As a Ph.D. student, you are mastering content that is already very familiar to you. Your focus is therefore on pushing the boundaries of your own knowledge and on making a worthwhile contribution to the existing body of knowledge. It is a path understood by few and questioned by many. This permanent state of "student-hood" challenges your conviction, perseverance, and desire for achievement in unimaginable ways. But what is so unique about Tech is that you do not have to struggle alone. As a female engineer, I am comforted by the fact that Tech awards more engineering degrees to women than any other school. As a minority, I am motivated by the fact that Georgia Tech is consistently rated among the top universities in the nation for graduation of underrepresented minorities in engineering, computer science, and architecture.

JESS HUNT-RALSTON

At Tech we are constantly faced with a climate of academic excellence, but what Tech also offers, if sought out, is an atmosphere of support through campus organizations and programs geared toward student success. I especially

encourage young female engineers to find your community and to engage yourself in ways that support your own development and the development of your peers. I found my support through the Women's Transportation Seminar (WTS), and I gained great rewards from my time as president of this group, which strives for the advancement of women in the transportation profession.

What is unparalleled about the Georgia Tech experience is the sense of community that you develop while here. There is something about striving to achieve your dreams with other likeminded and determined individuals. When you meet a fellow Jacket, you just know that they understand what you have been through. This reality was emphasized for me not long ago at a research conference in Washington D.C. Tech was well represented — current students, faculty, and alumni all contributed research and ideas to the conference. Our alumni are consultants, academics, government officials, and researchers who are all now leaders in their own right. We exchanged notes, explored opportunities for future collaboration, and beamed with pride at the strength of the Tech network.

When people learn that I attend Georgia Tech, I am often greeted with a combined look of confusion and amazement. I see this as a personal and professional challenge to debunk their perceptions of who an engineer is and what an engineer looks like. After all, I am a woman and a minority.

I challenge these misperceptions in a number of ways. First, I encourage young girls to follow their dreams of being scientists and engineers. My hope is that, as the share of women in our profession increases, our belonging becomes less questioned. Second, I challenge young female engineers to make themselves heard. Don't sit quietly in your class, on your project teams, or in your organizational meetings. Advocate for yourself, and for the value of your ideas. Finally, I strive for personal success. I have found that the best thing you can do to debunk misperceptions about who you are, or what your abilities are, is to be darn good at what you do!

Georgia Tech has helped me develop this conviction, and the truth is I would not trade my Georgia Tech experience for anything. ▪

Engineering for Maximum Impact

Pamela Bhatti brings engineering into medicine for a more immediate good.

by Michael Baxter

A cochlear implant is a wondrous device, tiny but complex, giving the sense of hearing to people who lack it. Unlike the hearing aid, which turns up the volume on life, a cochlear implant converts sound into electrical impulses, generating signals that ride the auditory nerve to the brain. For the half million or so people who have such an implant, it can be a godsend.

Yet it is far from perfect. People who once enjoyed healthy hearing and now have the device describe a world of auditory distortion – muffled, metallic, mangled sound.

Pamela Bhatti believes that world can be made better. The associate professor of electrical and computer engineering at Georgia Tech has invented a new component for the device: a coupling interface that makes the implant more than twice as precise in the quality of sound it delivers.

"Think of the cochlea as a tiny cinnamon roll," she says. "As we unravel it, we expose the frequency range of sound. Spanning the entire cinnamon roll are these nerve fibers." Today's cochlear implant, she explains, stimulates the nerve fibers that still function by using electrodes that coil within the cochlea.

By engineering a more robust array of electrodes on thin film, Bhatti came up with an alternative way of accessing more frequencies and generating more signals. The flexibility of the film makes it possible for it to be surgically implanted close to the cochlea's inner wall, and the intended effect is a clearer, sharper sense of hearing.

The interface component, now being evaluated in the pre-clinical stage, has generated a fair amount of acclaim for Bhatti. More important, it represents what drives this rapidly rising faculty star: deep, abiding sense of curiosity and a drive to put new knowledge to work in the world.

> **"There's a long time before you can see the device have an impact. So now I want to see what else I can do to more quickly impact the human population."**
>
> - Pamela Bhatti

A federally funded research project in cardiac radiology is another example. Bhatti is part of a multidisciplinary team using accelerometers to measure the motion of the human heart in order to capture better images for diagnosis and treatment. She's the team's resident engineer, and in addition to the accelerometer work, she's contributed another element of ingenuity to the effort: adding a camera unit and embedded system that captures and integrates a patient's photo with the imaging file.

"We saw this from the perspective of potential errors in patient identification," she says. "The technicians see the patient, but the radiologists only see a picture in a darkroom. They're so removed from the patient, yet they're so critical to the patient's care."

Bhatti's career has been characterized by a hunger for learning how things work and a pragmatic interest in making good use of the knowledge she gains. While an undergraduate studying biomedical engineering at the University of California, Berkeley, she took a job working on time-release drug delivery systems for Alza, where her mother was employed as a chemist. Graduate school at the University of Washington introduced her to sensor technology and teaching; she concentrated on electrical engineering because "I wanted to prove to myself that I could be a real double-E."

Marriage and private sector positions came next, until her path led her to the University of Michigan and a Ph.D. in electrical engineering. The teaching and research experience convinced her that she wanted to work in academia.

"Georgia Tech was my first interview," she recalls. "At first, I didn't see myself living in Atlanta. It just seemed like such a big city compared to someplace like Ann Arbor." But she was impressed with the scale and caliber of micro-electromechanical systems research being conducted at Tech,

GARY MEEK

and on her second visit, she was inspired by Professor Ayanna Howard and other women she met in electrical and computer engineering at Tech.

In the years since, Bhatti's work in radiology and cochlear implant technology has been augmented by teaching electrical engineering and conducting research in vestibular systems, the bio-mechanisms of human balance. Just as notably, she's accelerated her efforts to ensure that scientific research has the best chance of making a difference in people's lives.

It began with her 2011 enrollment in the Atlanta Clinical and Translational Science Institute (ACTSI). The consortium, involving researchers and clinicians from Georgia Tech, Emory University and Morehouse School of Medicine, is one of 64 across the country funded by the National Institutes of Health (NIH) for the purpose of translating discovery into human benefit.

"In ACTSI, I saw where I could make a difference beyond implantable devices," Bhatti says. "There's a long time before you can see the device have an impact. So now I want to see what else I can do to more quickly impact the human population." She pauses for a moment: "I guess I'm getting impatient."

That sense of urgency was evident when Bhatti participated in a National Science Foundation "boot camp" for enterprising scientists seeking to bring discovery and invention to market. Called Innovation Corps, or I-Corps for short, the experience was an opportunity for Bhatti to explore how her photo imaging and embedded system for radiography might be commercialized.

She found the training arduous and challenging, and she volunteered to help create a similar program launched by the NIH. Bhatti was tapped for that effort, so in early 2016 she will join colleagues for a series of workshops in Bethesda, Md., to shape the national curriculum for an NIH version of I-Corps.

"All of her mentors believe Pamela is a future leader," says Andrew West, senior administrator for ACTSI. "She's very savvy and even-keeled, very engaged, and we consider her one of our stars. She's going to go far." ▪

A Booming Career

The Sept. 11 attacks helped prompt Lauren Stewart to become a blast expert.

by Kay Kinard

Walking toward Lauren Stewart's office, you immediately smell the odor of glue in the air. A quick glance around reveals model bridges in various states of completion lying about a student work area, as harried undergraduates work to finish class assignments. Stewart, an assistant professor in civil and environmental engineering, teaches a beginning structures course, so this is a recurrent theme each semester. Stewart herself, however, is more at home with the smell of explosives and destruction rather than construction.

Her research is in impulsive blast mitigation – the study of high-speed, time-dependent explosive events. The Sept. 11 attacks steered Stewart toward doing her dissertation on the effects of vehicle-born explosives on steel-reinforced structures. Her current research, much of it done for the Department of Defense, focuses on blast and shock loads on structures.

• • •

What was the evolution between growing up and being here at Georgia Tech?
I was always good at science and math. From an early age, I always knew I would go into one of those fields. I liked being hands-on, and my master's degree was in earthquake engineering. I applied for and received a Department of Defense fellowship shortly after 9/11 to look at blast effects on structures. That fellowship got me into this research area, and I haven't looked back since.

Did 9/11 make you want to tie your structural engineering work in with the blast research?
My dad worked a lot at the Pentagon at that time; still does. We got calls that morning asking where he was. It made me cognizant about what happened to this structure, how could things be prevented. I was one of the first graduate students doing this research, but it was on my radar since the bombing at Oklahoma City. After 9/11, more funding went toward counterterrorism, so more money went into this area allowing more of us to do blast research.

How is blast research conducted?
It is a combination of field testing, where we construct and blow up an actual structure, to actually building a structure in the lab and using computer modeling and high speed visualization to observe blast and shock loads. I do a lot of applied research – what can we do now or in the future to fix the problems. I look at how we do testing to develop new designs for structures. I have a blast lab that I started building on my first day at Tech. We are able to test full-scale building structures and components by using ultra-fast hydraulics to impart the same load you would get with an explosive in less than a millisecond.

GARY MEEK

What is your lab like?
In the summer I go out in the field and spend a little time doing explosive tests on military bases. Most of the time we are in the lab using cameras and visualization techniques. Right now, one of my main research areas is looking at new experimental techniques in order to design different weapon systems for the Air Force. Blast research is a really niche field, and not very many people are doing this in academia. Most of this research is done by the military. I have 10 undergraduate researchers and eight grad students. Three of my grad students are active-duty or veterans; two are majors from the Army. My area of expertise aligns with their interests.

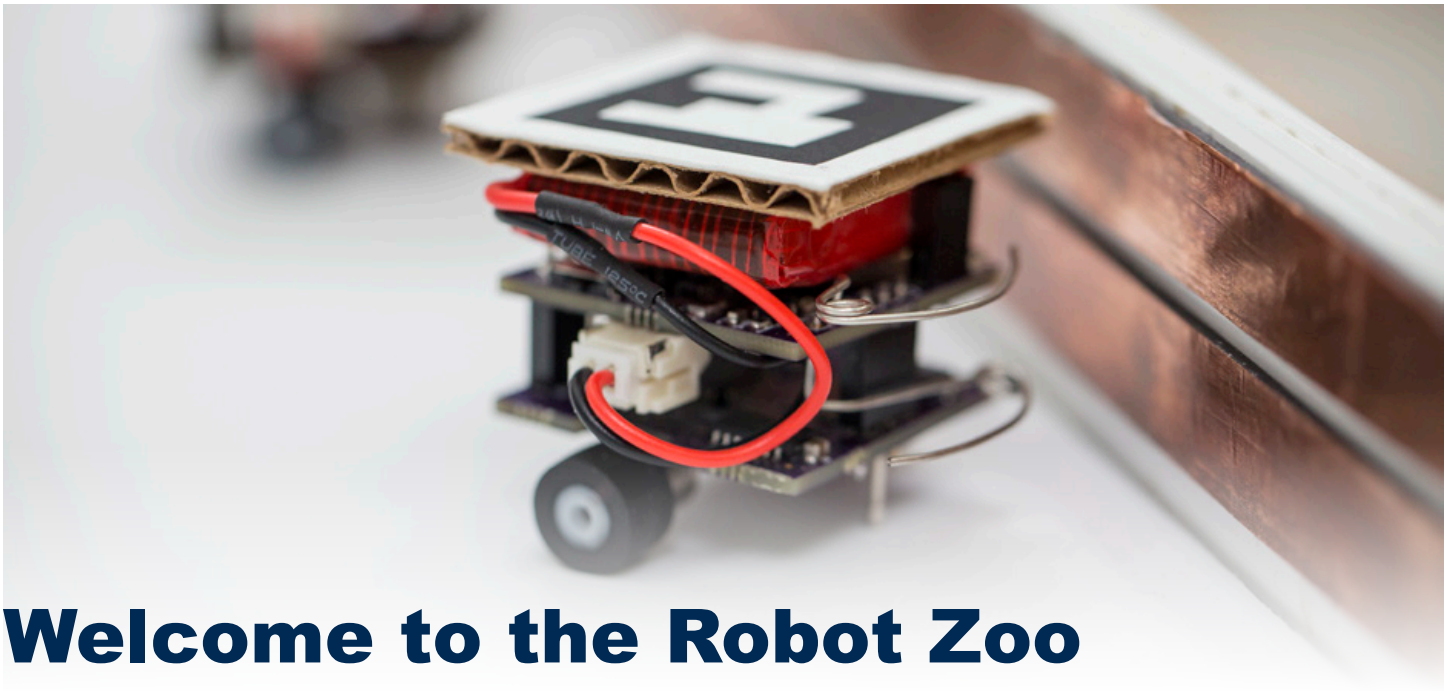
What is something you have learned from your research?
With blast research, we don't design the same way as an earthquake, which is governed by Mother Nature. You look at the vulnerability of the structure and try to determine the acceptable level of risk. You can design for a certain level of explosive, but somebody can always utilize more or new technologies. We are constantly chasing an evolving threat.

What led you to Tech?
I finished grad school but I didn't know what I wanted to do, so I worked as a post-doc and had my own startup company. Through this, I discovered I really wanted to be in the classroom. It was a really easy decision to make to come to Tech. After the interview, I felt the people were the right fit, the culture was the right fit, the students were great, and it was in a major city, which I liked.

What is it like being a woman engineer in a very male-dominant field?
I go to conferences with hundreds of people, and I am the only female in the room. I want to motivate other females to get into these fields. I bring a different viewpoint than the males do, which can be very valuable. My advice to female students is if people underestimate you because you are a woman, use it to your advantage. Being underestimated is one of the greatest competitive advantages you can have.

In my undergrad program I had no female professors. For me, I personally was still successful despite having no role models, but I do think it is important to have role models and give females similar opportunities.

In a perfect world we would not have to talk about bringing more women into engineering. We have to get to the point where we are not a rarity or exception, but the norm. ▪



Welcome to the Robot Zoo

Magnus Egerstedt's Robotarium could make robots accessible to all.

by Lyndsey Lewis

Life is good for Georgia Tech's roboticists. Buoyed by growing interest in the field, the Institute's robotics research has earned accolades around the world, and a few robots have become stars themselves. (You've probably seen coverage of Ayanna Howard's math-tutor bot or Magnus Egerstedt's dancing humanoids in your Facebook feed.)

But robots are expensive, and not every aspiring engineer can work in the gilded labs of Georgia Tech. And that's where Egerstedt, the Schlumberger Professor in the School of Electrical and Computer Engineering, comes in.

About a year ago, he had an idea: What if he could break the barriers that keep people out of his field by building a robotics playground for everyone? He mulled over the logistics and, after persuading a few professors and Ph.D. students to join him, he planned the Robotarium.

If all goes according to his designs, the Robotarium will become Georgia Tech's robot zoo, a home to machines of all shapes and sizes. They'll be accessible to anyone in the world, which means remote users will be able to upload their own code, run their own experiments, and test their own ideas.

Sound extreme? It is. But Egerstedt never lets that stand in his way.

"This is going to go big," he promises.

Tearing Down the Wall

The possibilities stretch in every direction. If Egerstedt can fill his menagerie with a diverse collection of machines, the Robotarium could become a lab for both basic tests and high-level research. That means, Egerstedt says, that the project might entice everyone from middle school science students to professors like him and his collaborators.

Aaron Ames, an associate professor in ECE and the Woodruff School of Mechanical Engineering, is one of those collaborators. Like Egerstedt, he's frustrated that so few people have access to pricey hardware – the linchpin behind most robotics research.

"That's the wall that prevents most academic work from translating to the commercial domain to the everyday-life domain," Ames says, "and this will break that open. This will tear down that wall."

Along with Ames, Egerstedt also enlisted the help of Professors Raheem Beyah (of ECE), Eric Feron (from the School of Aerospace Engineering), and Blair MacIntyre (from the School of Interactive Computing) to make the idea a reality. The National Science Foundation awarded the team $2.5 million to kick-start the work.

A few Ph.D. students are also involved. Chief among them is Daniel Pickem, who is studying robotic self-assembly under Egerstedt and ECE Professor Jeff Shamma. He shares Egerstedt's vision for what the Robotarium could become.

"I think it's going to be a powerful paradigm: maintenance-free, hassle-free robotics," Pickem says.

The Long View

Right now, Pickem spends many of his days debugging code and tweaking the boards of GRITSBots, tiny robots designed in Egerstedt's Georgia Robotics and Intelligent Systems Lab. These creatures live on a large table that is, in a way, the first incarnation of the Robotarium.

Its gleaming white surface makes it resemble an air hockey table. But there's important work being done here: The GRITSBots can move and interact with each other based on remote users' controls. The table offers a glimpse of the Robotarium in miniature, and it allows Egerstedt and his colleagues to anticipate potential problems with a facility that's accessible to anyone.

A key concern is safety, which is being overseen by Ames.

"The first thing that's going to happen when you open it to the public is someone is going to try to break it," he acknowledges. He's already developed an algorithm to prevent robots from colliding with each other, but there's a lot more work to come.

Today, there is just the white table. Egerstedt estimates another three to five years could pass before the full Robotarium is complete.

He likes taking the long view. Though he is known for championing novel — and sometimes untested — ways to make robotics more accessible, his ideas are informed by his past experiences.

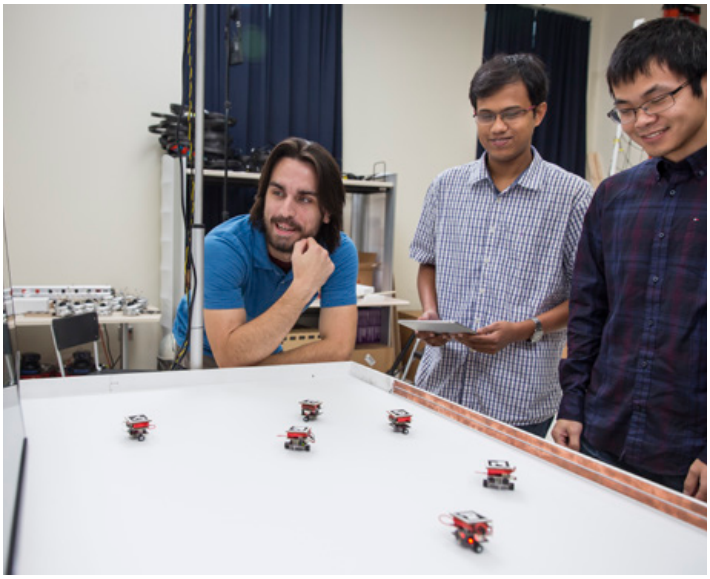
As the professor of one of Georgia Tech's early massive open online courses (MOOCs), he aimed to make advanced controls coursework available to anyone. After that, he contemplated using the principles of the MOOC for larger projects.

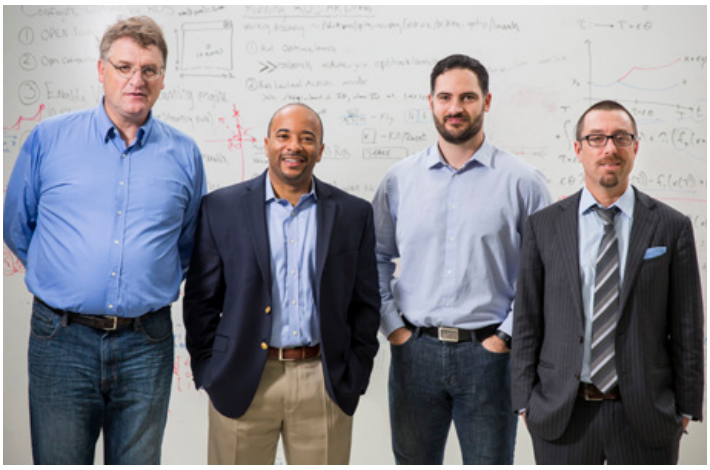
"I was thinking: What does a MOOC look like in research?" he says. (A robot zoo, apparently.)

The Crystal Cathedral

But what's in it for Georgia Tech and the College of Engineering? A lot of exposure, of course, but also the chance to be at the vanguard of robotics. Ames points out that if Georgia Tech unlocks the doors to its advanced machinery, it could set off a sea change in the field.

There is also the appeal of sheer theatrics, which could captivate people who might not otherwise be interested.





Top: GRITSBots skitter across the Robotarium table. Bottom: Faculty members Eric Feron, Raheem Beyah, Aaron Ames, and Magnus Egerstedt are collaborating on the Robotarium. ALL PHOTOS RAFTERMEN PHOTOGRAPHY

"Part of the vision is almost performance art," Egerstedt says. Once the Robotarium is operating at peak capacity, its robots will be visible to anyone with an Internet connection, so they "should always be on and doing something compelling."

Eventually, he envisions the Robotarium as a "crystal cathedral" smack in the center of the campus, where students and professors will have front-row seats to its humanoids, flying machines, and other wonders.

Again, it sounds extreme. But if anyone can get it done, it's probably Egerstedt, one of Georgia Tech's most effective preachers of the gospel of robotics.

That doesn't mean he doesn't expect some resistance along the way, though, and he knows there will only be one way to appease the Robotarium's naysayers.

"The only weapon," Egerstedt says, "is success." ▪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In Their Own Words

I was inspired to become an engineer because...

...cutting edge of technology...

...there are huge opportunities out there...

...learning how things work and why...

One thing I loved about Tech...

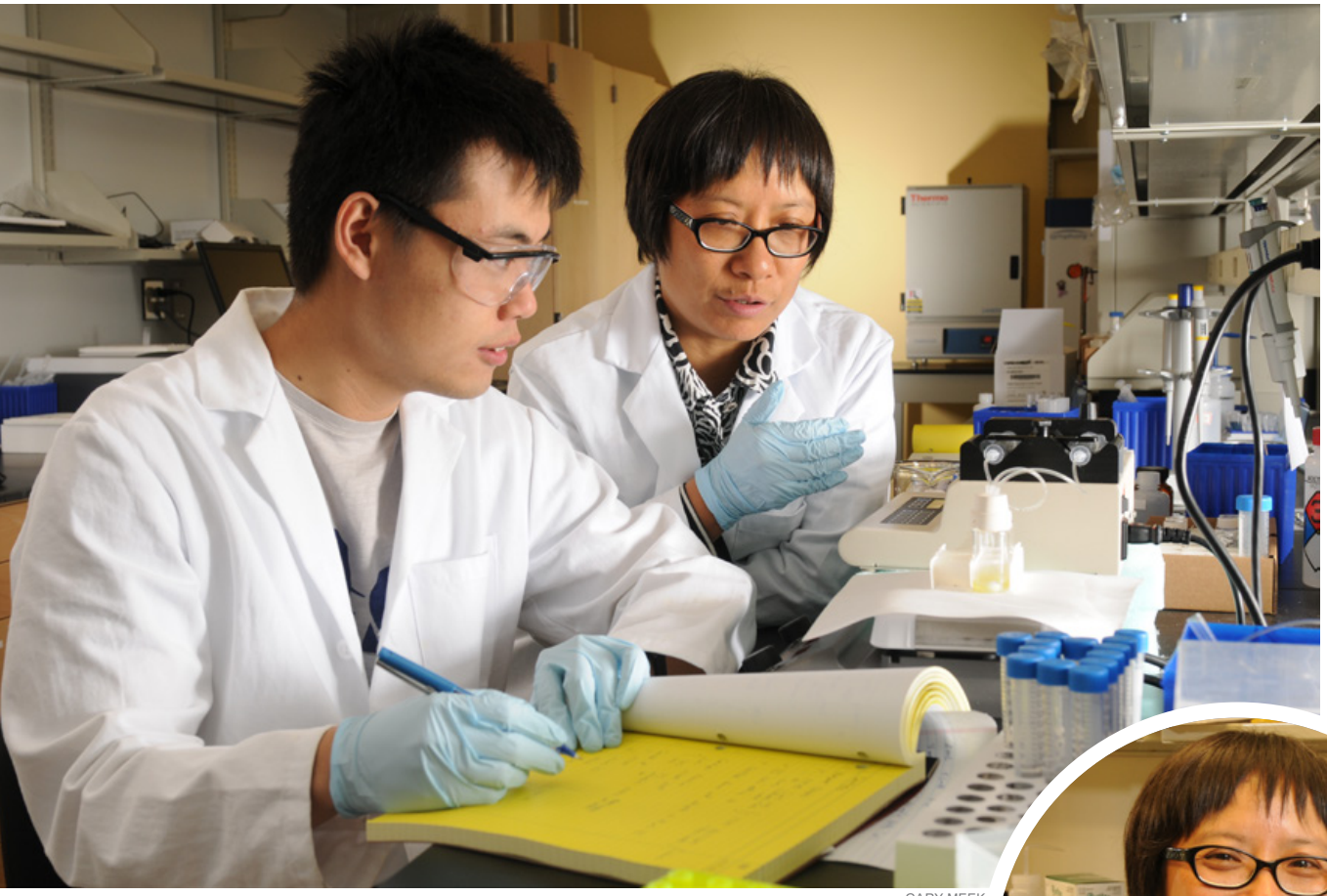
...beyond classroom learning...

...energy and can-do attitude...

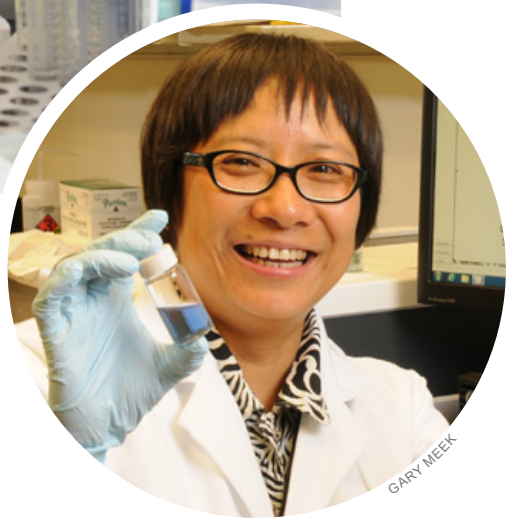
...I discovered my true professional passion...

Female faculty members, students, and alumnae discuss their work, their goals, and what it means to be a

GEORGIA TECH ENGINEER



GARY MEEK



GARY MEEK

Dong Qin

Associate Professor; School of Materials Science and Engineering

I truly enjoy my interactions with my students in the classroom to promote their effective learning at Georgia Tech. Tech has the best research environment to cultivate an active research program in which both graduate and undergraduate students would perform research to acquire knowledge from labs beyond classroom learning.

GARY MEEK

Melissa Kemp

Associate Professor; Coulter Department of Biomedical Engineering

I love the energy and can-do attitude that I consistently find among Georgia Tech researchers. Instead of feeling constrained by technical limitations, people here develop new tools so that they can ask and answer the important questions.

Stacie Sire

Civil engineering alumna

Inspirations

I was inspired in high school to become a structural engineer because of my high school boyfriend's dad, Al Ruhl, who worked for Shell as a structural engineer designing off-shore drilling platforms/structures. Their family was a second family to me. I had a lot of respect for Al, and he was one of my first engineering mentors and shaped the trajectory of my life and career.

My other inspiration was my grandfather, Charles Najt. He passed many years ago. He was an engineer at heart, though due to the war didn't complete an engineering degree. He was a natural-born engineer and one of the smartest people I've ever known. When he found out I was considering engineering as my field of interest, he became very interested in encouraging me in that direction.

How She Landed a Job at Boeing

I was offered the job at Boeing during my last quarter senior year. My soil mechanics professor (an unlikely person to connect me with the aerospace industry) at the time helped connect me with the Boeing interviewers. I had several offers that were more traditional civil engineering positions, but felt the career in aerospace as a structural designer/analyst would be the most interesting and challenging. I realized that even though I had awe and passion for buildings and bridges, my fascination for airplanes was far greater.

What She Loved About Tech

I loved being part of an institution that was on the cutting edge of technology. I remember in my engineering graphics/CAD class during one of the early quarters at Tech, we had a project where we created an environment via CAD. My project was a house with various rooms and furniture. At the completion of the project, we were all able to go experience our creations through virtual reality. I was able to walk through the rooms I had created, look under tables I had modeled, walk around other obstacles I had created from my imagination. I was blown away! It was so new at the time that most people didn't even know what it was. I remember describing it to family and friends and it seemed more like science fiction.

> **"I loved being part of an institution on the cutting edge of technology."**

I also loved the environment that included such a strong thirst for knowledge. I loved getting to meet and be in class with some of the most brilliant people I had encountered up until that point in my life.

Advice for Future Engineers

If you love problem solving, have a passion for understanding how things work and why they work as they do, love math and science, have a creative nature and are interested in innovation…then you might love being an engineer.

Stacie Sire on the flight deck of a Boeing 787 Dreamliner during a test flight in September 2011. Sire was invited to ride in the plane's control center in recognition of the years she spent helping to design and test the 787 airframe. PHOTOS COURTESY STACIE SIRE

Keisha Tanner

Chemical engineering alumna

How She Got Started in Her Field

After interning for Amoco Corporation at the Chocolate Bayou Chemical Plant in 1992, I was awarded an extension and received a second internship opportunity. I recall a telephone conversation with a recruiter asking if I would be interested in taking an internship in the oil and gas industry. My response at the time was, "I do not know anything about the oil and gas industry. Therefore, sign me up!" Because of these opportunities, I believe that internships are the best way to learn about industries and a company's culture. During the summer of 1994, my visit to an offshore facility solidified my desire to support oil and gas operations long term. By taking a perceived risk of interning in a new industry, I discovered my true professional passion.

The "Twister" Moment

When I started in 1995, there were very few female engineers supporting offshore operations. As my career progressed, I was given the opportunity to bring online and monitor performance of deepwater wells for BP's Marlin Facility as the production engineer. The first wells were unconventional, requiring both vacuum insulated tubing and fiber optic temperature monitoring throughout the wellbore. To be offshore and see this fiber (only as thick as a fishing line) being pumped downhole was interesting. But physically witnessing the fiber optic temperature monitoring system as it captured a dynamic temperature profile while "ramping up" a well, was unforgettable. I still refer to it as my "Twister" moment: You may recall the exciting moment in the movie in which the scientist were finally able the see inside of the tornado, by gathering industry-changing information. Well, providing operations with the ability to capture and monitor the wellbore temperature profile in real-time is a moment that I will never forget.

Finding a Sense of Family at Georgia Tech

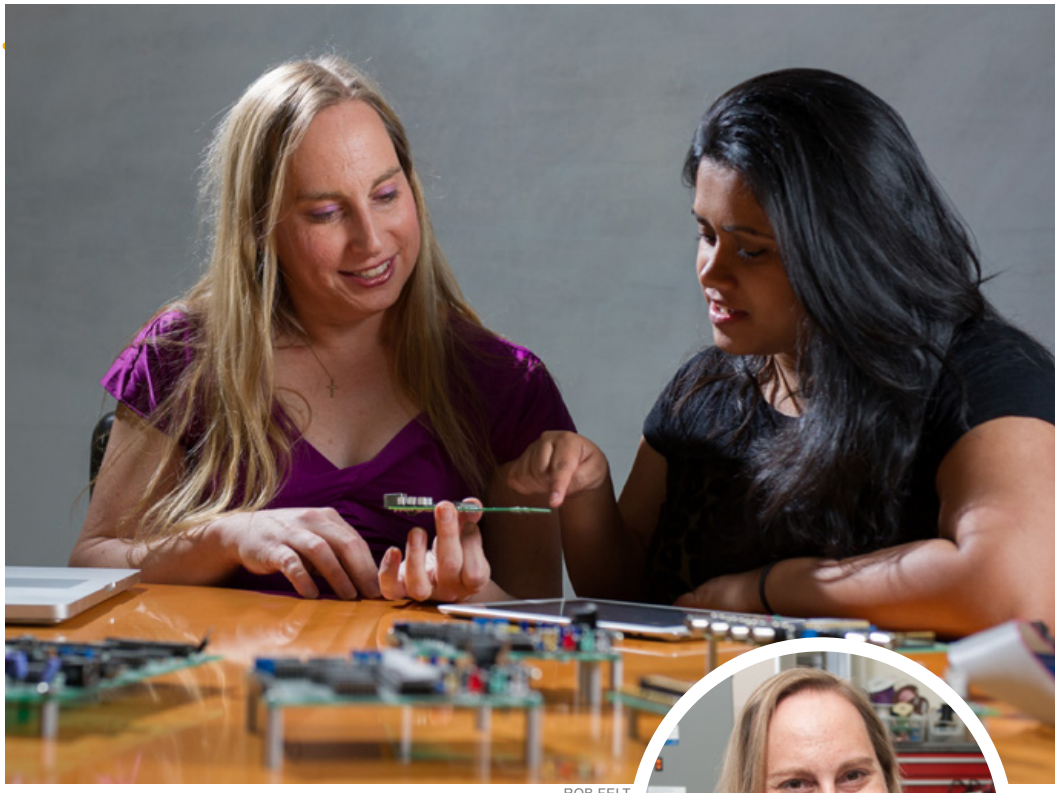
I was born in Nicholls, Ga., a very small southeastern town in Coffee County. I graduated with a class of 29 students from a public school. Needless to say, my first calculus class at Georgia Tech had as many students as my entire kindergarten-through-12th grade school in Nicholls. As you can imagine, in such a small town, you know everyone. There was a strong sense of family and support there. And then I arrived at Georgia Tech! Wow!

Luckily, I met some students from the OMED's Challenge Program. They shared OMED's mission, along with their willingness to offer tutoring. I found not only academic support, but the sense of family that I needed to survive my matriculation at Tech.

Advice for Young People Interested in the Energy Industry

Do not allow the current downturn in our industry to dissuade you from considering a career in the energy industry. I interned 2 summers with Amoco Corporation, and at both times experienced "right-sizing." However, I did not permit that to hinder the fact that I really enjoyed reservoir modeling and the operational supporting aspects of my internship. When I joined the BP/Amoco organization in 1995, very few people were hired that year, as I recall. However, 21 years later, I am still excited about my future with the BP and about the future of the energy industry.

PHOTOS COURTESY KEISHA TANNER



ROB FELT

> **What I do is never boring. It's a wonderful thing to think about how we can use technology and computing to continue to make progress and impact people's lives.**

FITRAH HAMID

Jennifer Hasler

Professor; School of Electrical and Computer Engineering

My focus is to continue pushing the evolution of device computing by designing smaller, faster, and more efficient devices, all while using less power. The next major jump in technological progress will come from our ability to understand how the human brain computes and to replicate this power in a machine. Building a human-like cortex in something that could use as little as 50 watts of power and is small enough to fit on a desk is possible in the not-too-distant future and would enable what is currently unimaginable in the world of technology.

What I do is never boring. It's a wonderful thing to think about how we can use technology and computing to continue to make progress and impact people's lives. There are huge opportunities out there and that's an endless source of excitement and inspiration.

PHOTO COURTESY BAILEY BERCIK

Bailey Bercik

Student; electrical engineering

I love that I can study abroad, be a sister in Alpha Gamma Delta, play in a band at Under the Couch, serve as a Peer Mentor, teach programming to children in the i3 Experience, and work with a supportive group of women through [ECE Ambassadors and Women in ECE] — while earning a degree at one of the best universities in the world. I couldn't imagine a better college experience. The possibilities here are endless.

GARY MEEK

Wonya Lucas was the keynote speaker at the 2015 Women in Engineering Banquet.

PHOTO COURTESY WONYA LUCAS

Wonya Lucas

Alumna: industrial engineering

Never in a million years did I imagine that I would be in the media and entertainment world. Surprisingly, I have found many senior leaders in the media world who started with a foundation in ISyE.

Elise Alfonso

Student: industrial engineering

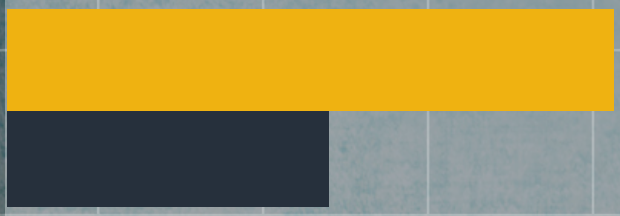
Shortly after I began applying to colleges, I visited some of them with my family. When I visited Tech I fell in love with its campus, with its message, and with its people. Everyone I met was so friendly and welcoming, and they all reassured me that Tech was dedicated to making my educational experience exceptional. The pivotal moment in making my decision was my first tour of campus. It was cold outside, and there were flurries in the air.

My tour guide, Paco, was wearing the thickest jacket I had ever seen, but he was also wearing cargo shorts and flip-flops. It was a peculiar combination of clothing, but he seemed perfectly comfortable and had a cheery smile on his face during the entire tour. I was astonished at how many people he knew on campus. Every few minutes, he would see someone, interrupt the tour to wave or say hello, and then tell the entire group an extremely descriptive story about how he knew the person. That is when I decided I wanted to attend Tech – a university where I could feel comfortable expressing myself and walk around campus waving at everyone I passed by.

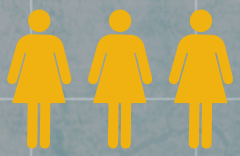
Elise serves as vice director of education for MOVE, Georgia Tech's umbrella organization for a variety of community service and volunteer opportunities.
PHOTOS COURTESY ELISE ALFONSO

By the **Numbers**

32% of students in the College of Engineering are women (versus 17% female enrollment nationally), fall 2015



The College of Engineering has 72 female faculty members, fall 2015

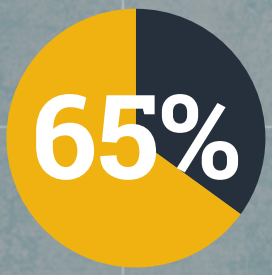


22% of Tech engineering degrees awarded were to women, 2014-2015

Georgia Tech is No. 1 in engineering degrees awarded to women

American Society for Engineering Education

Over 50% of students majoring in environmental and biomedical engineering are women, fall 2015



Environmental Engineering

Biomedical Engineering

AUSTIN FOOTE / GEORGIA TECH ATHLETICS

Meet Georgia Tech's Golden Girl

One of America's top twirlers is also a Georgia Tech environmental engineering major.

Interview by Ben Wright

Originally from Davenport, Iowa, Annabel McAtee is one of the top twirlers in America and was a bronze medalist at the 2012 World Twirling Championships. The second-year environmental engineering major took an unorthodox path to Georgia Tech that included living in a circus community in Hawaii and taking high school classes almost exclusively online.

How did you get involved in twirling?

I got into twirling when I was in the third grade. Two girls did it at recess and I just thought it was so cool. I had never seen anything like that before. I grew up dancing, and switching gears to that seemed like a lot of fun. There was a little studio close to my hometown that I went to for a couple of years, once a week after school, and it took off from there. I had coaches from different parts of the country – I had a coach from Louisiana, and one from Michigan. The summer after eighth grade I made it to the world championships, which were in Switzerland. That was a really awesome experience. I competed there, and then for high school I wanted to up my level, so I switched to a coach in Hawaii. I lived with a host family for two years and trained with my coach almost non-stop.

What was it like living in Hawaii?

The place I lived was a self-sustainable artistic eco-village. It was basically a huge circus community. You would walk down the street and there would be kids juggling everywhere; it was

so much fun. There were people who unicycled, did tumbling, trampoline routines, acrobatics with silks – everything you can think of from a circus. It was kind of funny, because the people who lived there were from all over the world. They grew up in the circus, moved there, and then had kids, so the kids grow up in this really unique environment. It's called SPACE: the Seaview Performing Arts Center for Education. I spent two years there and I did two years of high school online so I could travel and compete.

How did you end up at Georgia Tech?

I ended up at Tech because I went to Peru my last year of high school. Every year 12 twirlers are invited to Peru to perform in the International Spring Festival. The chaperone on that trip was the twirling coach at Tech, Brandy Kirschner. I'm from Iowa and I didn't know a lot about Tech. She asked me about my interests, and I said I wanted to be an engineer but I still wanted to twirl in school. When she told me about Tech it just sounded perfect. It had both of the things I was looking for – engineering and twirling.

I looked at a few other schools, but a lot of the ones I looked at either had a great engineering program with limited athletics or a big football program but not strong academics. I didn't even send my audition video anywhere else. I had it made for a few schools, but after visiting Tech it was the only place I really wanted to go.

What does your twirling and band practice schedule look like during the school year?

In the fall we have band practice Monday, Wednesday, and Friday, and then we have workouts on Tuesday and Thursday. That's very much to prepare for the performance on the field, but I also like to work on straight-up techniques in the gym, so I try to fit in some of that a best as I can. It's hard during the school year.

In the spring I fit in as many practices as I can. In high school I went to an online school so I pretty much twirled all day, and coming here it was weird to switch gears. My practices are condensed compared to what I was used to, and I have to be very organized with my time.

Why did you choose to study engineering?

I've always loved math and science, and for me, engineering is a way that I feel I can apply my two strengths and interests to a common good to help make the world a better place. I chose environmental engineering because when you spend a lot of time in Hawaii, you gain a huge appreciation for the trees, the sea, and the whole ecosystem. The people there live off of the land and rely on it for everything, and that made me want to protect it. I thought going into environmental engineering would be the best way for me to do that.

Do you have a favorite part of performing, and do you prefer performing over competing?

It's all so much fun and all so different. I love every part of it. The fire is really different and kind of cool. When you grow up in twirling, you're always competing and everyone is kind of out to get you. It's a very tense environment. Now people are actually cheering for me, like when I do fire in front of the fraternities. They want to see me do a good job, and it's so much fun. It's so different, but it's a lot more fun and enjoyable having them rooting for me instead of against me.

I still really appreciate the technical side of competition, though. It's an art as well as a sport, but I like how it's systematic and technical, like engineering. On the field it's more performance and maybe more on the art side. Performance and competition use different sides of your brain and a different focus. I love both sides of it.

What prompted you to start twirling flaming batons?

I actually started with fire when I was very young. I don't know why my parents, who are lawyers, thought that was a good idea. I was probably 10 or 11. The Iowa State Fair has a really big talent show. You qualify at a local fair and then go to the state fair and compete for a $5,000 prize. I always did fire for that, but as I got to middle school and high school I stopped because you don't use it in competitions. I picked it up again when I came to Tech.

Have you ever burned yourself?

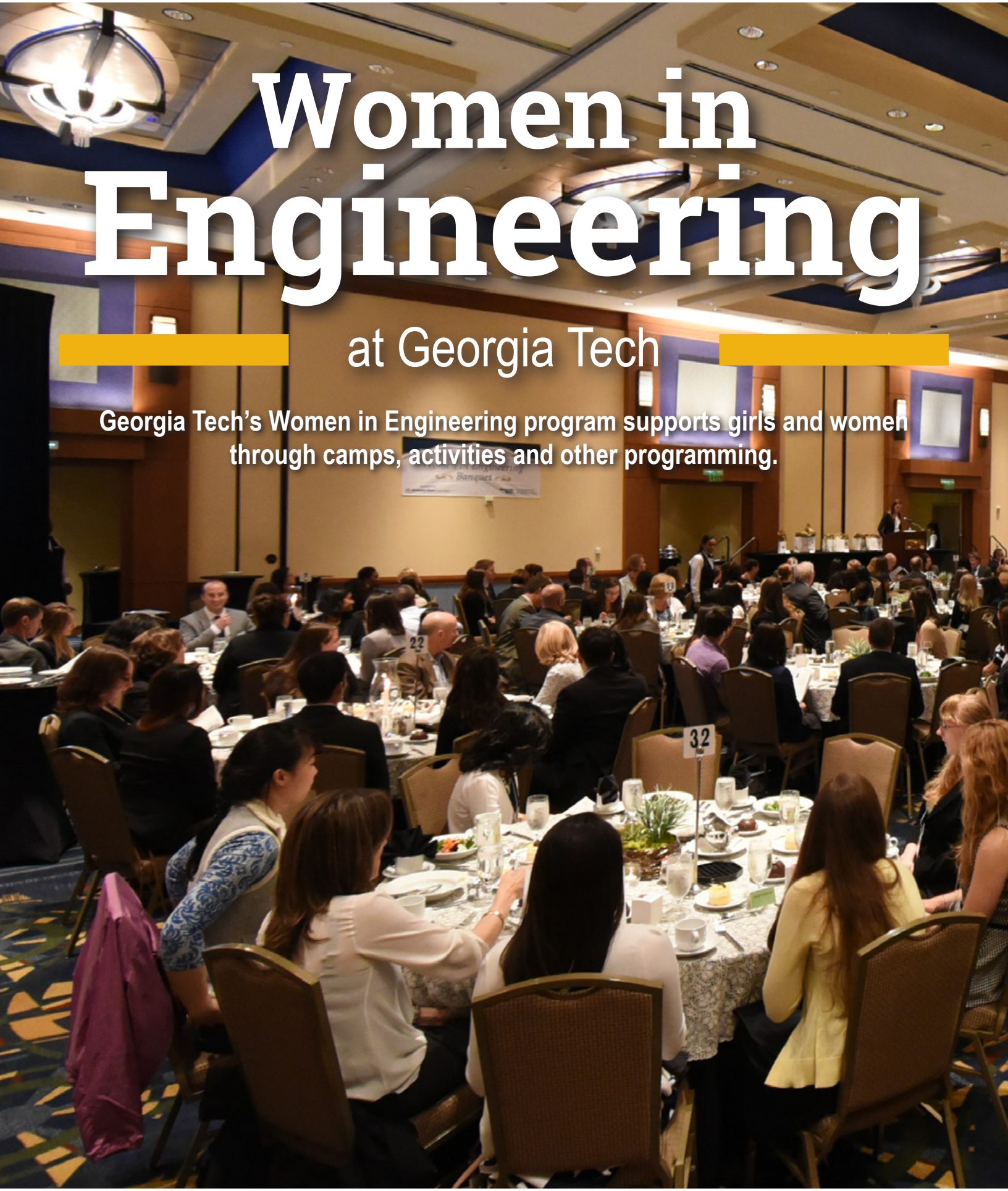
I've never burned myself. I feel the heat, and it gets intense. After every game the hair on my arm is usually singed, but I've never had a bad burn. Nothing that required attention or left a scar. ▪

DANNY KARNIK / GEORGIA TECH ATHLETICS

“I wanted to be an engineer but I still wanted to twirl in school. When she told me about Tech it just sounded perfect. It had both of the things I was looking for — engineering and twirling.”

DANNY KARNIK / GEORGIA TECH ATHLETICS

COURTESY ANNABEL MCATEE



Women in Engineering

at Georgia Tech

Georgia Tech's Women in Engineering program supports girls and women through camps, activities and other programming.

WIE Banquet

Held each spring, the Women in Engineering (WIE) Banquet brings together more than 500 students, alumni, corporate partners, and Institute leaders to celebrate female engineering students who have earned GPAs of 3.0 or above.

Technology, Engineering, & Computing (TEC) Camp

The week-long day camp hosts about 40 middle school girls, and it introduces them to engineering through topics like coding and robotics. The goal is to interest girls in these fields early in the hopes they might someday pursue STEM degrees.

Corporate Open House

At this recruitment event, companies that support WIE can meet with some of the College of Engineering's top female students.

Mentor & Mentee (M&M) Spin-Matching Event

M&M pairs younger female students with juniors and seniors for peer mentoring. At the annual spin-matching event, students can meet plenty of potential mentors.

Students Exploring Engineering (SEE)

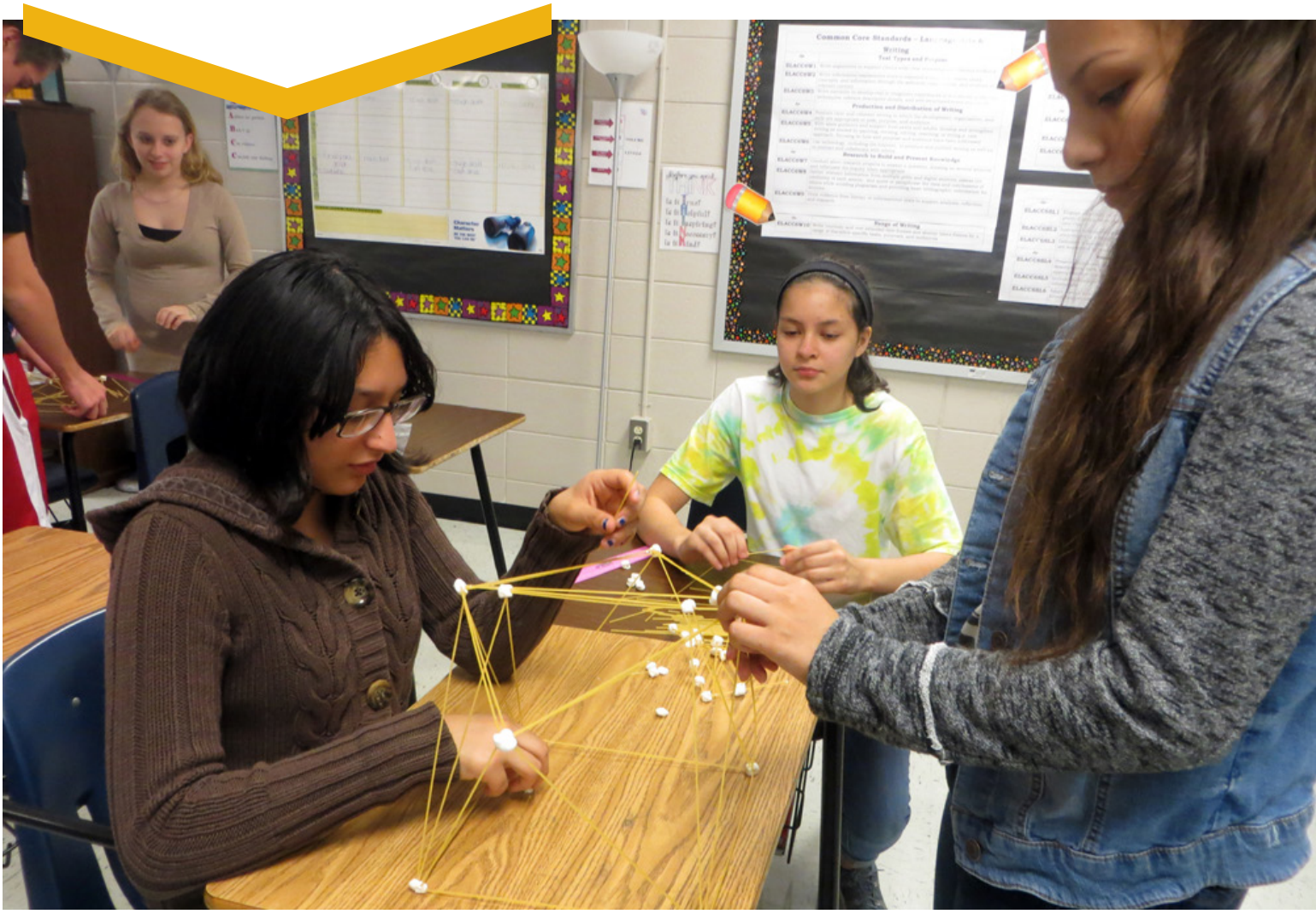
Female high school freshmen and sophomores tour Georgia Tech, visit campus labs, and participate in engineering projects through the SEE program.

GT1000 WIE

Every fall, there's a section of GT1000 designed for female engineering majors. The class is capped at 25 people to foster a more intimate atmosphere and encourage students to get to know each other.

CoE Champions

CoE Champions, elite engineering students from diverse backgrounds and cultures, are ambassadors for the College of Engineering.



Now Seeking: (Very) Generous Benefactor to Name CoE

The chance of a lifetime awaits the right donor.

by Lyndsey Lewis

If you keep up with Georgia Tech news, you probably heard about the conclusion of Campaign Georgia Tech. (And if you're a Tech donor, maybe you've already clinked champagne glasses to celebrate.)

The largest capital campaign in Institute history, this 11-and-a-half-year fundraising drive concluded in December with a staggering sum of money: about $1.8 billion. The College of Engineering brought in over $543 million of that amount.

It's an impressive accomplishment, to be sure. But there's more work to be done, and CoE still offers a particularly interesting (if pricey) chance for donors to leave their mark.

CoE officials are hoping to name the college, an achievement that would mean millions more dollars for engineering programs across every discipline. Naming the college would also broadcast a powerful message about philanthropic commitment to Tech engineering.

Of course, not just any donor can give a gift of this magnitude. The asking price to name the college is $100 million, and that investment will be help cement CoE's status as one of the world's premier engineering colleges.

"This gift will have the power to fundamentally transform the future of the college," said Gary May, CoE's dean of engineering and Southern Company chair.

One of the key measures this donation would go toward is graduate stipends. Right now, CoE's stipends aren't competitive with what universities of a similar caliber offer students, and that poses a serious obstacle. Graduate students are the backbone behind much of Georgia Tech's research, and without the ability to enroll top students, the college faces challenges in elevating its research, teaching and commercialization efforts.

There are similar issues with attracting and keeping elite faculty members. A gift to name the college would provide for more chairs and professorships, which are crucial to retaining top professors and bolstering their work.

But any university can claim goals like these. Part of what makes CoE special is the people who are already here — the college claims one of the most diverse student bodies of any engineering program in the country. And, aside from just admitting more women and underrepresented minorities than anywhere else, CoE graduates more than any other engineering college as well.

It's something to be proud of, but there's more work to be done. By naming CoE, a donor would help ensure continued funding for any student, regardless of her or his background, to attend Georgia Tech. The gift would also create more chances for students to participate in unique curriculum offerings like CREATE-X, a collective of programs designed to boost students' entrepreneurial confidence.

Many of the country's other prestigious engineering colleges — at institutions like the University of Texas and Northwestern University — already bear names. Before long, CoE officials hope, the right person will help Georgia Tech's engineering program join those ranks. ▪

Georgia Tech College of Engineering

The College of Engineering at Georgia Tech is the largest program of its kind in the country, with more than 13,000 undergraduate and graduate students enrolled. The college ranks among the top 10 programs in undergraduate and graduate engineering as determined by U.S. News and World Report.

Georgia Tech College of Engineering
Office of the Dean
225 North Avenue
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Georgia Tech's signature landmark, the Lettie Pate Whitehead Evans Administration Building (known to most as Tech Tower), is undergoing renovations for the rest of 2016. High atop the tower, though, some things remain the same as they ever were.

ROB FELT