INSIGHT Into Diversity

September 2015
$3.99

www.insightintodiversity.com

First Name: 
Last Name: 
Institution/Company Name: 
Your Position: 

Copies of STEM Issue ($1.50 each):
Billing Name: 
Billing Address: 
Billing Email Address: 

INSIGHT Into Diversity Presents:

An exciting new recognition for women who make a difference in STEM fields

100 Inspiring Women in STEM Awards

Also in this issue:
How some institutions are addressing the Supreme Court’s recent ruling on same-sex marriage

The University of South Carolina emphasizes inclusion
Cal Poly Pomona College of Engineering faculty and staff congratulates chemical & materials engineering Professor Dr. Winny Dong for being selected as a recipient of the 100 Inspiring Women in STEM Award.

Dr. Winny Dong

9th Internationally
Formula Society of Automotive Engineers placed in top 10 at Formula Student Germany out of 118 teams.

1st Nationally
Largest civil engineering program, as reported by the Engineering Workforce Commission.

7th Nationally

100+ Faculty
Faculty from across the globe use their academic and professional experience to develop hands-on curriculum that blends theory and practice.

70 Laboratories
Our 250,000 square feet of laboratory and instructional space provides both classroom and research opportunities.

5,600 Engineering Students
17th Largest engineering college, according to the American Society of Engineering Education.

WE TRAIN WORLD-CLASS, WORKFORCE READY ENGINEERS

CAL POLY POMONA

engineering@cpp.edu | www.cpp.edu/engineering

@cppengineering
STEM Dean Roundtable

Three female deans of science, technology, engineering, and mathematics (STEM) schools share their insights on the need to increase the number of — and retain — women and underrepresented minorities in these fields and better educate our nation’s youth for a brighter future.

By Alexandra Vollman

Extraordinary Women in STEM

Our 100 Inspiring Women in STEM Award recognizes the accomplishments of women in science, technology, engineering, and mathematics fields. We also highlight interesting facts about the history and future of women in these areas.

Special Report: STEM Programs

- Master’s-to-PhD Program Paves Smooth Path for Underrepresented Students
  By Madeline Szrom

- Improving Recognition Through Awards: How to Mitigate Bias in Awards
  By Heather Metcalf, PhD

- Benefits of OU Engineering Bridge Program Stretch Beyond Summer
  By Rebecca Prinster

- Non-Cognitive Competencies in Graduate Admissions: Enhancing Validity and Diversity
  By Casey W. Miller, PhD

- Wesley Cannon Scholars Program Provides Support for Low-Income STEM Majors
  By Sarah Edwards

- Help Wanted: STEM Professions Offer Growth and Opportunity
  By Alexandra Vollman

Colleges Consider New Policies in Light of Supreme Court Ruling on Same-Sex Marriage

By Tannette Johnson-Elie
All girls deserve encouragement, opportunity and the empowering belief that their potential has no limit.

Madeline Palmer
1. Central Michigan University College of Medicine Student
2. One of 100 Inspiring Women in STEM

Palmer is the founding co-director of STEMpowered, a nonprofit organization that operates a science, technology, math and engineering summer camp for inner-city Detroit Public School girls. Palmer also spoke last year at the Great Lakes Bay Regional Alliance STEM Impact Initiative Summit. Palmer’s 100 Inspiring Women award is CMU’s most recent honor for advancing multiculturalism, diversity and inclusion. Others include:

- Higher Education Excellence in Diversity Award – 2014
- College and University Professional Association for Human Resources Inclusion Cultivates Excellence Award – 2013

Thank you, Maddie, for helping others to see unlimited possibilities.

cmich.edu
In Every Issue

In Brief
6  Diversity and Inclusion News Roundup

New Directions
10  Diversity Leaders on the Move

INSIGHT Partner Profile
12  NCWIT Provides Tools for Recruiting and Retaining Women in IT
    By Alexandra Vollman

HEED Award Spotlight
14  Achieving Diversity Through Inclusion: The University of South Carolina’s Active Commitment
    By Tannette Johnson-Elie and Alexandra Vollman

Community College Spotlight
16  Welcoming Faces and Places for Conversation: AACC’s New Programs Highlight Inclusion
    By Rebecca Prinster

CDO Corner
18  Inclusive Visioning
    By Sylvia Gail Kinard

Careers
66  Job Opportunities

Closing INSIGHT
74  Student Spotlight
University of Cincinnati Scholars Academy Opens Door for STEM High School Students

In an effort to increase the number of underrepresented and low-income students who enter STEM fields, the University of Cincinnati (UC) kicked off its Scholars Academy bridge program in June in partnership with Hughes STEM High School in Cincinnati.

Through the program, students at the predominantly African American high school are immersed in the science, technology, engineering, and mathematics disciplines in order to prepare them for college.

“Our nation’s capacity to be competitive depends on our ability to nurture the next generation of scientists and engineers,” UC President Santa J. Ono said in a press release. “Our Hughes program allows us to do this right in our own backyard and to do so with a diverse set of students from our city’s core neighborhoods.”

In June, the first cohort of students — which included 12 juniors and seniors from Hughes — attended the three-week bridge program at UC. While there, they participated in problem-solving and critical skills classes, met with and listened to STEM professionals, learned about career options, and created a project with the Design, Architecture, Art, and Planning College, among other activities. Students will participate in an internship and attend enrichment classes at UC throughout this academic year.

By collaborating with Hughes, UC is able to work toward its goal of narrowing the widening college completion gap between high- and low-income students.

The Scholars Academy will eventually expand to include year-round support for Hughes students and include even younger students.

— Alexandra Vollman

Better Together: How the CIC Is Producing More Minority Faculty

The Big Ten Conference — which includes 14 public universities across 11 states — is the oldest Division One athletic conference in the U.S., and in 1958, the Committee on Institutional Cooperation (CIC) was formed as its academic counterpart.

The CIC includes all Big Ten universities plus the University of Chicago, which left the conference in 1946. This consortium shares researchers, laboratories, and innovative findings to improve its collective ability to compete with research institutions around the world.

According to Barbara Allen, executive director of the CIC, member universities conduct $10.8 billion in research every year — more than the University of California system and Ivy League schools combined — and produce between 20 to 25 percent of new PhDs in engineering, chemistry, and other science disciplines every year.

“We certainly have a vested interest in directing the future of research and the development of new knowledge and discovery,” Allen says. “We also have a commitment to the human capital connected to research. … The development of the scientific and academic research workforce can’t happen well if it doesn’t include all races and ethnicities.”

With a $1.46 million award from the National Science Foundation, the CIC established its Professorial Advancement Initiative (PAI) to increase the number of underrepresented minorities (URMs) in STEM faculty positions.

In addition to expanding the pool of URM postdoctoral fellows in professorial positions in STEM disciplines and the number of those hired as faculty members at CIC institutions, the PAI works to train faculty and faculty search committees on unconscious bias and diversity hiring.

Existing tenured faculty members, many of whom are from URMs, serve as mentors to postdoctoral fellows. The PAI is also examining how the work of these STEM fellows is affected by mentors’ expectations and how the fellows in turn affect mentors’ unconscious biases.

According to Charity Farber, senior program manager at the CIC, in two years, the PAI has successfully doubled the number of URM faculty in STEM disciplines across participating campuses.

— Rebecca Prinster
The State University of New York (SUNY) College at Buffalo (Buffalo State) has named Jevon Hunter to its Woods-Beals Endowed Chair in Urban Education. He has been an assistant professor of elementary education and reading at Buffalo State since 2010 and is the first African American to be appointed as chair.

The position is funded by a $1 million endowment given by alumna Eleanore Woods Beals and her husband, Vaughn Beals, to the university in 2002. Woods Beals graduated from Buffalo State in 1950 and is a former teacher. Her husband is the former chair of Harley-Davidson Inc.

At the time of the donation, which created Buffalo State’s first-ever endowed chair, Woods Beals said, “The current performance levels of our public school graduates versus those in other countries confirms the need for marked improvements in public education. Buffalo State’s long and productive history, combined with the demographics of its student body ... qualit[y] to it to be a national leader in solving these problems.”

Wendy Paterson, dean of the School of Education at Buffalo State, says Hunter was a natural choice for the appointment, as he exemplifies the vision the Beals have for the position.

“The field of scholars in urban education is impressive, but few bring as insightful an understanding to the task of research in practice as Dr. Hunter does,” Paterson said in a press release.

Hunter’s research focuses on the intersection of culture, history, and language with learning, literacy, and technology; he also examines the implications this intersection has on social justice, diversity, schooling equity, and access.

“I now have time, because of the course load reductions [that come with the chaired position], … to expand upon my research on the literacy practices of Buffalo youth in an effort to understand how they think of and use literacy in their daily lives,” Hunter says. “I will also use the Woods-Beals Endowed Chair resources to begin a teacher-focused initiative called The Urban Teacher Collaborative to support a cadre of urban teachers in designing and implementing innovative, relevant, and sustainable curricula that meet the academic and personal needs of our city’s youth.”

He also plans to launch a summer literacy enrichment program to engage young African American men. Hunter says the endowed position means a lot to him, personally and professionally, and that it validates the work he has done in urban education research.

— Rebecca Prinster

Celebrating National Hispanic Heritage Month

National Hispanic Heritage Month:
From Sept. 15 to Oct. 15, we celebrate the contributions and culture of Hispanic and Latino Americans; this year’s theme is “Honoring Our Heritage. Building Our Future.”

As of 2013, the U.S. Hispanic population reached an estimated 54 million people, or 17 percent of the nation’s total population, making it the second-largest Hispanic population in the world behind Mexico.

In 1954, Hernandez v. Texas became the first post-World War II Latino civil rights case heard and decided by the U.S. Supreme Court. The landmark ruling established equal protection for Mexican Americans, and all other ethnic groups, under the 14th Amendment.

Born in Puerto Rico in 1944, Antonia Novello became the first Hispanic and the first woman to serve as U.S. Surgeon General, in 1990. During and after her tenure, Novello campaigned for AIDS awareness and helped improve access to healthcare for women, children, and minorities.
Michigan Tech Takes Hands-On, Teamwork Approach to Diversity Training

Incoming students to Michigan Technological University’s mechanical engineering program this fall can expect more than a standard engineering education with the introduction of a newly designed hands-on curriculum that incorporates diversity training.

The university’s Department of Mechanical Engineering-Engineering Mechanics was selected by the National Science Foundation (NSF) as one of five mechanical engineering departments nationwide to participate in a new diversity training program. The Transforming Engineering Culture to Advance Inclusion and Diversity (TECAID) program is aimed at diversifying mechanical engineering education, making it more inclusive of women and underrepresented minorities.

“We’re always striving to have better students, and this is one thing we’ve really never had — teaching the students about diversity and how to appreciate diversity and [their] differences,” says Gregory Odegard, associate chair, director of undergraduate studies, and professor of computational mathematics at Michigan Tech.

Through the program, the department is working with TECAID consultants and other participating institutions, which include Texas Tech University, the University of Oklahoma, Oregon State University, and Purdue University. Schools and consultants participate in three two-day workshops — the first one took place in April, with the others scheduled for October and February — as well as monthly conference calls.

Consultants provide reports to each school to help them address any issues they notice and advise them on how to incorporate change, while universities assist each other by sharing ideas and best practices.

“At each meeting, we talk about our progress,” Odegard says. “Each of us is doing something slightly different, but for all five universities, it’s diversity-related. So we each talk about what we’ve done, we give each other ideas, and sometimes we get suggestions on resources.”

For Michigan Tech, which was already in the process of developing a new mechanical engineering curriculum, the TECAID program came about at the perfect time. Odegard says the department is incorporating elements of diversity into four of the program’s core classes: Mechanical Engineering Practice I, II, III, and IV. Students complete these courses in their second and third year in the program.

A main focus of these classes, Odegard says, is teamwork.

“In the first semester,” he says, “we’re going to expose them to basic aspects of teaming; that is, when they work together in their group, we’re going to teach them how to get to know the other students, how to work in a group, how to set an agenda, how to get to know everybody’s strengths, and how to communicate early on with their teammates and make sure [everyone] understands each other’s limitations.”

Odegard hopes that this infusion of diversity into the new hands-on curriculum will not only help students better understand and appreciate diversity, but will also enable them to work well with people of different backgrounds — which, Odegard believes, will put them on the path toward a successful career.

“What we really want is for students to come out of this as better engineers,” he says. “Engineers are so involved in technology, and more and more are working together. What we’d really like is for them to go into their careers being able to work with others very well, because they’re going to be working in teams whatever company they work for, and we want them to be very effective team members and leaders.”

— Alexandra Vollman
Lenore Pearlstein, co-owner of Potomac Publishing, Inc. and publisher of INSIGHT Into Diversity magazine, spoke at the Ohio Diversity Officers Collaboration’s (ODOC) Seventh Annual Diversity Conference in Rootstown, Ohio, in July. This year’s theme was “Shifting Diversity Gears: Challenges and Solutions.”

At the event, Pearlstein discussed diversity and inclusion trends at colleges and universities nationwide based on data and findings from applications submitted by recipients of the 2015 INSIGHT Into Diversity Higher Education Excellence in Diversity (HEED) Award. The presentation included a comparison of six-year graduation rates of minority students at baccalaureate-granting HEED institutions to National Center for Education Statistics data of other institutions, showing that the rates for HEED institutions are substantially higher. Pearlstein also explored what these and other findings mean for colleges and universities, and she offered recommendations for diversity best practices.

The HEED Award recognizes U.S. colleges and universities that demonstrate an outstanding commitment to diversity and inclusion. It measures an institution’s level of achievement in regard to broadening diversity and inclusion on campus through initiatives; programs and outreach; student recruitment, retention, and completion; and hiring practices for faculty and staff. The main goal of the HEED Award Benchmarking Report is to help schools assess their diversity efforts in order to build upon their successes and identify areas where more work is needed.

The conference took place Friday, July 24, at the Northeast Ohio Medical University campus (NEOMED) in Rootstown. Other speakers included Dr. Derald Wing Sue, PhD, professor of psychology and education at the Teachers College at Columbia University; Dr. David Gordon, dean of the College of Health Professions at the University of Akron; and Lonny Rivera, PhD, associate superintendent of the Ohio Department of Education. The ODOC brings together various members of Ohio institutions, including faculty, staff, students, and administrators, and serves as the pre-eminent voice for diversity officers and multicultural professionals in higher education. For more information about ODOC, visit ohio-diversity.org.

— Alexandra Vollman

The 2015 HEED Award Benchmarking Report Shares Diversity Findings and Best Practices

The INSIGHT Into Diversity Higher Education Excellence in Diversity (HEED) Award Benchmarking Report will provide invaluable information and best practices to help institutions assess their diversity and inclusion efforts. The report, authored by Dr. Damon A. Williams, will be compiled from data and findings from applications submitted by recipients of the 2015 HEED Award. In it, Williams will highlight institutions’ capabilities as they relate to access and equity, student recruitment and retention, campus climate and inclusion, research and training, leadership commitment, and more.

Benchmarking Report findings help colleges and universities nationwide assess their efforts in order to determine areas for improvement. For more information, visit insightintodiversity.com/about-the-heed-award.
Talmadge King Jr., MD, has been appointed dean of the School of Medicine and vice chancellor for medical affairs at the University of California, San Francisco. He had been serving as chair of the university’s department of medicine within the School of Medicine.

Amit Taneja has been named associate dean for diversity and inclusion and chief diversity officer at the College of the Holy Cross in Worcester. He was previously director of diversity and inclusion at Hamilton College in Clinton, N.Y.

Richard Baker, MD, has been appointed vice dean of medical education at Wayne State University School of Medicine in Detroit. He had been executive director of the Center for Health Services Research and chair of the department of ophthalmology at Charles R. Drew University of Medicine and Science in Los Angeles.

Tiffany Paige, JD, has been promoted to director of admissions and diversity initiatives of Mississippi College School of Law in Jackson. She had been assistant director of admissions at the college.

Blane Harding has been appointed director of the Center for Student Cultural Diversity at the University of Nevada, Reno. He was director of the Office of Multicultural Affairs at the University of Kansas in Lawrence.

Talmadge King Jr., MD, has been appointed dean of the School of Medicine and vice chancellor for medical affairs at the University of California, San Francisco. He had been serving as chair of the university’s department of medicine within the School of Medicine.

Amit Taneja has been named associate dean for diversity and inclusion and chief diversity officer at the College of the Holy Cross in Worcester. He was previously director of diversity and inclusion at Hamilton College in Clinton, N.Y.

Richard Baker, MD, has been appointed vice dean of medical education at Wayne State University School of Medicine in Detroit. He had been executive director of the Center for Health Services Research and chair of the department of ophthalmology at Charles R. Drew University of Medicine and Science in Los Angeles.

Tiffany Paige, JD, has been promoted to director of admissions and diversity initiatives of Mississippi College School of Law in Jackson. She had been assistant director of admissions at the college.

Blane Harding has been appointed director of the Center for Student Cultural Diversity at the University of Nevada, Reno. He was director of the Office of Multicultural Affairs at the University of Kansas in Lawrence.
David Wilkes, MD, has been named dean of University of Virginia School of Medicine in Charlottesville. He was executive associate dean for research affairs at the Indiana University School of Medicine in Indianapolis.

Cheryl Nuñez has been named the first vice president for equity and inclusion at Olympic College in Bremerton. She was formerly assistant to the president for diversity and equity and chief diversity officer at Xavier University in Cincinnati, Ohio.

Gina Brown, PhD, has been appointed dean of the College of Nursing and Allied Health Sciences at Howard University. She was an associate professor of nursing at Loma Linda University in California.

Anthony Wutoh, PhD, has been named provost and chief academic officer of Howard University. He had been serving as dean of the College of Pharmacy and assistant provost for international programs at the university.

Andrés Gonzalez has been named vice president and chief diversity officer for Froedtert Health in Milwaukee, a regional health network that includes the Medical College of Wisconsin. He was most recently chief diversity and inclusion officer at Baystate Health System in Springfield, Mass.
Although women are slowly beginning to make up a larger overall percentage of the STEM workforce, some occupations are still experiencing a wide gender gap — and one field has actually seen a decrease in female representation. In 2013, only 26 percent of computing professionals were women, down from 35 percent in 1990, according to a study from the American Association of University Women. Meanwhile, the U.S. Bureau of Labor Statistics predicts that information technology (IT) will add nearly 1.4 million jobs to the U.S. economy by 2020.

The National Center for Women & Information Technology (NCWIT) is doing what it can to ensure women fill their share of those positions. A nonprofit chartered in 2004 by the National Science Foundation (NSF), NCWIT is made up of more than 650 member organizations, including companies, universities, and government and nonprofit organizations, all focused on the same goal: increasing the number of women and girls in technology and computing. A group of NCWIT Extension Services consultants and staff at the 2015 NCWIT Summit on Hilton Head Island, S.C., this past May

A nonprofit chartered in 2004 by the National Science Foundation (NSF), NCWIT is made up of more than 650 member organizations, including companies, universities, and government and nonprofit organizations, all focused on the same goal: increasing the number of women and girls in technology and computing.

“We’re not talking about a woman working at [a tech company] ... in the HR department. We’re talking about women actually at the innovation table, creating this technology. They’re in technical roles that shape our future innovation,” says Adriane Bradberry, communications director for NCWIT.

One key way NCWIT works to achieve its mission is through its Extension Services for Undergraduate Programs (ES-UP), a customized consulting service designed to help computing-related departments at colleges and universities. Available only to NCWIT Academic Alliance members, the service is designed to help colleges and universities develop high-impact strategies for recruiting and retaining more female students.

Like all NCWIT programs, ES-UP equips member organizations with the tools they need to enact long-term, sustainable change for themselves, rather than doing the work for them. Through ES-UP, institutions consult with NCWIT to evaluate their current efforts and discover areas to improve in order to increase the number of women in their degree programs, as well as supporting and retaining them.

“In Extension Services, we’re focusing on faculty and undergraduate programs — how the teaching is done; the culture of the faculty; the culture the students are entering; how faculty are presenting their fields in terms of addressing misconceptions about computing, which there are a lot of,” says Beth Quinn, director of ES-UP. “Making diversity something that’s not just an add-on or an extra thing ... but something that is integrated into the way in which they [operate].” Participating institutions are assigned an Extension Services consultant with expertise in evaluation and organizational change. The consultant first collects and uses data from the school to determine where it is currently, then works to identify goals and collaborates to construct a strategic recruitment plan. Consultants then act as cheerleaders to help motivate and drive institutional change until the school’s actions become habit, Quinn says.

“The consultants are really good at diagnosing organizations and figuring out how the team is working, what resources they have, how to leverage the resources that are already there, and what’s possible given, say, their
geography; also, what's possible for getting additional funding," she says. “So it’s really a multi-tiered approach to building capacity in the faculty and then also capacity in the organization itself, and then trying a lot of different things and evaluating them. For a lot of schools, this is the first time they’ve worked with an expert like this.”

Additionally, many of these institutions face unique challenges that require customized approaches to solving — which NCWIT provides. These challenges often include geography and location, demographics, and competition with other schools, among others. Consultants consider all of these factors in their recommendations, then develop strategies for recruiting and retaining women that will work for each institution and situation.

According to NCWIT data, members who have utilized ES-UP are beginning to see results. From 2007 to 2013, ES-UP client programs have, as a group, increased the percentage of women graduates in their programs by 65 percent over the baseline, granted 219 more bachelor of science degrees in computer science, and increased women’s representation in their graduating classes from 11 percent to 14 percent.

NCWIT has been able to develop and assist two ES-UP cohorts, each consisting of 15 institutions, and expand its offering of tools and resources thanks to funding from NSF and Google.org. NCWIT is currently seeking other sources of funding in order to continue offering Extension Services to its members, but the organization — chartered with a sunset clause of 20 years — only has until 2024 to meet its objective.

“In 20 years, our goal is that the problem will be fixed, that the issue of underrepresentation of women and girls will be fixed,” Bradberry says. “Over time, we’ve changed what that looks like, so what do we mean when we say ‘fixed’? When all the organizations that should care do care about having women and girls represented, we’ve achieved our goal.”

Accomplishing this goal will be no small feat, but it is one Quinn, and everyone else at NCWIT, is passionate about — and not just because of the clear benefits it provides.

“We know that diverse teams tend to produce smarter outcomes, smarter decisions, and better innovation, so … we need the people developing those technologies to be representative of the people that they’re serving,” says Quinn. “It’s a great career, so we want to see girls, if they’re interested, be able to pursue it.”

Alexandra Vollman is the editor of INSIGHT Into Diversity. To learn more about NCWIT, visit ncwit.org.

Coming soon!

Call for nominations for the INSIGHT Into Diversity “Giving Back” Awards to be featured in the April 2016 Leadership Support issue.
Achieving Diversity Through Inclusion: The University of South Carolina’s Active Commitment

By Tannette Johnson-Elie and Alexandra Vollman

When hired last year as the University of South Carolina’s (USC) first chief diversity officer, John Dozier had his work cut out for him. While minority student enrollment at the university is at 20 percent, that number has remained steady over the last several years.

“It’s hard to attract people to a place that’s not always perceived as diverse,” says Dozier, who is also director of community engagement for USC and a native of South Carolina.

Prior to becoming USC’s chief diversity officer, Dozier spent 12 years in higher education administration with the City Colleges of Chicago, where he eventually became president of Kennedy–King College.

Since returning to his home state, Dozier has worked closely with top USC administrators to develop a strong strategic plan around diversity and inclusion. The purpose of the Office of Diversity and Inclusion, Dozier says, is to create a learning, living, and working environment where all students, faculty, and staff feel that they — and their work — are valued.

“Diversity and inclusion involves not only helping underrepresented students; it’s helping all students, faculty, and staff to be successful,” he says.

With this in mind, USC has worked to ensure the success of all students — from minority students to those from low-income households — by focusing on inclusion and support.

“This is a dynamic environment that offers a lot, but we recognize that many students come here and have challenges making the kinds of connections that will lead to their success,” says Dozier. “As such, [at USC] the words ‘diversity’ and ‘inclusion’ aren’t nouns; they’re verbs. We’ve coined the phrase ‘dive in,’ which articulates the spirit of engagement needed to help us [as a university community] experience the strength of our diversity, break down walls of exclusion, and live our values.”

USC offers a variety of services, resources, and multicultural programs through its Office of Multicultural Student Affairs (OMSA) to meet the needs of underrepresented students.

Its Minority Assistance Peer Program (MAPP), for example, helps first-year minority students and minority transfer students with the transition to college life. The program provides them with a trained mentor their first year and helps them establish positive networks within the campus community.

“We have found that MAPP students have a 98 percent retention rate from their first to second year at USC, and 80 percent go on to graduate from the university,” says Shay Malone, director of the Office of Multicultural Affairs. “MAPP is the first supportive network that helps you navigate the nuances of campus life. You know you have a safe space on campus when you get here.”

Tamagail Tarrant is a MAPP success story. Tarrant, who is Filipino and African American, is a senior biological science major at USC. She has been involved with the program since her freshman year and believes it has helped her grow.

“Because of MAPP, I’ve been given amazing opportunities … that I would not have been able to experience if I never joined,” says Tarrant, who is now a MAPP mentor. “The support
Students at the University of South Carolina

it provides for multicultural students is vital because it gives them a place, a common ground, where they are important to other individuals on campus.”

USC takes its commitment to inclusion seriously. In addition to offering support for multicultural students, the university also helps ensure the success of low-income students with its Gamecock Guarantee, a need-based financial aid award. This award provides a minimum grant of $2,500 to students who meet certain criteria and is accompanied by the promise that if this amount, combined with the student’s other financial aid, doesn’t cover the cost of undergraduate tuition and technology fees, USC will cover the difference. Students who receive this assistance are required to become actively involved with other USC programs, like the Opportunity Scholars Program (OSP).

Another USC program designed to encourage student success, the OSP is open to Pell Grant students who may also be the first in their families to attend college. By creating small and supportive campus communities and providing academic support services, tutoring assistance, research guidance, and study abroad and cultural enrichment opportunities, OSP seeks to increase the probability of these students’ success by helping them adjust to college life.

Much like the Gamecock Guarantee, OSP also provides financial support to students in need by offering a tuition break to students who enroll in three or more OSP courses.

Paul Beasley, director of TRIO Programs (which includes OSP and the Gamecock Guarantee) at USC, says these initiatives offer invaluable support and have led to graduation rates that are as high as — and sometimes higher than — that of the general student population.

“With a commitment to serve the educational interests of the state, USC must also be committed to tapping into that pool of talent by providing opportunities for poor and working-class students to come to campus, engage the academic community, experience meaningful education, and earn degrees,” Beasley said in an email. “The Opportunity Scholars Program and the Gamecock Guarantee address the barriers that most often restrict access to the university.”

USC students, faculty, and staff also take the university’s commitment to diversity and inclusion seriously and have adopted a values statement called “The Carolinian Creed.” Created in 1990, the creed obligates each member of the university community to adopt a code of civilized behavior, which includes:

• Practicing personal and academic integrity
• Respecting the rights and property of others
• Discouraging bigotry while striving to learn from differences in people, ideas, and opinions
• Demonstrating concern for others, their feelings, and their need for conditions that support their work and development

“We must be intentional about how we help our students develop healthy attitudes about race and other differences, as we are creating tomorrow’s community, civic, and business leaders.”

— John Dozier, chief diversity officer at USC

“The Carolinian Creed is an important statement regarding who we are as a university community,” Dozier says. “To that end, we must continue to educate our community about how to apply these values in addressing the differences encountered at this university. We must also be intentional about how we help our students develop healthy attitudes about race and other differences, as we are creating tomorrow’s community, civic, and business leaders.”

Tannette Johnson-Elie is a contributing writer for INSIGHT Into Diversity. Alexandra Vollman is the editor of INSIGHT Into Diversity. The University of South Carolina is a 2012, 2013, and 2014 HEED Award recipient.
Welcoming Faces and Places for Conversation: AACC’s New Programs Highlight Inclusion

By Rebecca Prinster

Anne Arundel Community College (AACC) in Arnold, Md., appointed its first chief diversity officer last year, and since he began, James Felton has been busy implementing new diversity and inclusion initiatives.

He credits AACC President Dawn Lindsay for identifying the need for his position and for her steadfast dedication to diversity and inclusion efforts at the college.

“She saw the changing demographics of our students and realized that we needed to have a faculty that reflects that,” Felton says. “We had the strategic diversity plan, but we know that if there isn’t someone to put that plan into action, it just kind of sits on the shelf collecting dust.”

Lindsay serves on the American Association of Community College’s (“the other AACC,” as Felton calls it) Commission on Diversity, Inclusion, and Equity and is a member of the Anne Arundel County Public School’s Blue Ribbon Commission on Equity and Achievement.

It was with her support that the Office of Inclusion, Diversity, Equity, Access, and Leadership (IDEAL) was created at AACC, in collaboration with the diversity committee. Felton says the office’s name was chosen to reflect its diversity efforts and the college’s core values of access and inclusion.

Through IDEAL, AACC is launching several initiatives this fall that exemplify that dedication to inclusivity.

One of these is the Diversity Welcoming Committee, which assists during on-campus faculty interviews. Committee members are on hand to answer any questions job candidates of all backgrounds may have about the college and the Anne Arundel County area.

“We do this to show our dedication to having an inclusive campus and to provide a welcoming face,” Felton says, “but also to provide information on resources and programs at the school and answer cultural questions, like where to find certain cuisines or health stores, or where the diverse neighborhoods are — things you can’t always learn from reading the welcome magazines.”

Felton is also working to bring transformational intergroup dialogues to campus. Twenty-two people from the college and surrounding community — from sociology faculty to members of the American Red Cross — will be trained as dialogue facilitators this fall. The purpose of these dialogues is to create a space to talk about difficult topics, such as race and class, to facilitate understanding.

Felton is planning a Day of Dialogue event in the spring, with sessions for both the community and campus to attend.

In a similar vein, this year AACC is considering reprising its “Year of Social Justice” theme from the last academic year. Throughout the last term, the school held a variety of events and discussions on topics ranging from Islamophobia to the history of medical experimentations on communities of color. Felton says AACC is very proud of the success of this initiative and the buzz it created on campus.

Next on Felton’s agenda is updating AACC’s diversity plan to be more equity-minded in serving the needs of a diverse student population.

“What I want to do now is figure out what resources and support the college needs to implement that speak to the social and lived experiences of students and faculty,” Felton says. “The [2009–2014] plan involved creating my position and bringing diversity to education and programming. Now we’ve moved past that to … thinking about how we can be fair and equitable and figuring out what that looks like.”

Rebecca Prinster is a senior staff writer for INSIGHT Into Diversity.
California State University San Marcos (CSUSM) is committed to respecting and reflecting the diversity of our region and fostering a diverse and inclusive campus environment that promotes the open exchange of ideas. We will continue to move forward by developing an inclusive curriculum and co-curriculum, strengthening inclusive programming, increasing compositional diversity, providing equal access, and reducing and eliminating barriers to educational achievement.

CSUSM has earned Hispanic-Serving Institution (HSI) and Asian American, Native American, Pacific Islander-Serving Institution (AANAPISI) designations.

AHEAD Fundraising Toolkit

Contact info@drwilliamtlewis.com for more information

Directors of Advancement:

Think Strategically!
Think Systematically!
Think AHEAD!

Dr. William T. Lewis, Sr., & Associates offers innovative coaching and capacity building solutions to help higher education advancement professionals increase brand value and market share from diverse and underutilized alumni and donor constituencies. Our signature service, the Assessing Higher Education Advancement of Diversity Fundraising (AHEAD) Toolkit is a strategic assessment and evaluation of the interface between colleges and universities fundraising and diversity efforts. This program will provide your advancement staff the tools they need to increase the philanthropy of diverse and underutilized alumni and donors. Dr. Lewis offers three customizable packages to meet your university needs and budget.
Inclusive Visioning

By Sylvia Gail Kinard

The future requires more than “thinking outside the box.” It requires redefining what the box is in order to let go of institutional structures that no longer serve us. Inclusive Visioning is a tool that institutions and organizations can use to redefine the box and harness the power of diversity to transform their self-perception and revolutionize their vision.

American society is becoming more diverse in viewpoints and values, and that’s a good thing. Researcher Katherine Phillips, who is the Paul Calello Professor of Leadership and Ethics at Columbia Business School, believes that increased diversity will give us permission to be ourselves. She states that the mere presence of social diversity makes people with independent viewpoints more willing to voice their views and makes others more willing to listen.

Yet even academic institutions seem resistant to intellectual integration. According to the National Center for Education Statistics (NCES), at most postsecondary institutions, faculty and staff remain predominantly white at a time when white student enrollment has been declining. In a 2015 report, NCES reported that among full-time instructional faculty in degree-granting postsecondary institutions, 79 percent were white, 6 percent African American, 10 percent Asian or Pacific Islander, and, making up less than one percent each, Native Americans or Alaska Natives and those who identified as two or more races. NCES reported comparable statistics in administrative ranks in 2012, noting that of 2.9 million staff members, 69 percent were white, 7 percent African American, 5 percent Hispanic, 6 percent Asian, and 12 percent some other race.

Diversity is important because it fuels innovation, improves intercultural communication, and produces a better brand. Yet despite so many positives, institutional ambivalence to diversity still remains.

One possible reason for such ambivalence is noted by Yale researcher Kenji Yoshino in his book Covering: The Hidden Assault on Our Civil Rights. He says that individuals “cover” to tone down a disfavored identity and fit into mainstream culture. According to Yoshino, the benefits of diversity will remain elusive if members of minority groups are accepted only when they conform to and reflect the values, cultural norms, and aspirations of the majority. Therefore, the mere presence of previously underrepresented groups will not reflect a true integration of diverse ideas and viewpoints if these individuals are covering their uniqueness in order to fit in.

However, there is an approach institutions can take to cultivate diversity. Inclusive Visioning (IV) is aimed at helping institutions develop strategic plans that are an organic synthesis of equally valued ideas. The IV system flattens unnecessary hierarchy by pushing power down and out, and it infuses diversity into the
strategic planning process through a team-imagining technique.

Think of Silicon Valley during its infancy. Billion-dollar companies were founded by university whiz kids who used the petri-dish dynamics of their college experiences to shape the environments of their startup businesses. To allow spontaneous creativity to thrive, these cutting-edge businesses offered pool tables, flexible working hours, organic cafeterias, and crash pads; they even allowed employees to bring their dogs to work. Similarly, IV helps institutions understand what they need to change — and how to change it — in order to promote new dynamic growth (i.e., to re-think the box).

Many forward-leaning organizations, including academic institutions, find themselves hindered by tradition and hierarchical structures. Hierarchical systems are often resistant to diverse viewpoints and averse to innovation. These structures can also rigidify the institutional ego in ways that consolidate all power at the top and ignore the fact that good ideas can bubble up from unexpected places. The best institutions are eliminating artificial walls that keep them from gaining a competitive advantage, and they are finding ways to share decision-making power across a broader spectrum of stakeholders.

Change leaders must identify historical impediments to inclusion and address systemic resistance to diversity. Essential to removing these barriers is understanding an institution’s “backstory.” Leaders must be aware of an institution's history in order to identify ingrained values that are resistant to inclusive decision making and need to be eliminated.

In today’s world, the speed at which knowledge advances belies the top-down manner in which power has traditionally been exercised. Creating an inclusive vision will therefore require that teams, or micro-communities, collaborate as equals to both identify and execute institutional goals.

If Yoshino is correct, many institutions err when they reward only those individuals who most closely conform to the status quo while ignoring or minimizing the contributions of those who don’t. Diversity is not just about hiring people or recruiting students who are different. Diversity is a process of infusing the institution with nontraditional values and experiences that help move the institution beyond the limitations of its past and re-shape it in new and exciting ways.

Through team imagining, institutions can promote the development of breakthrough ideas with the help of organic brainstorming. Team imagining helps create cultural diffusion by suspending a false belief in what is best, what is acceptable, and what should be done. It allows team members to uncover the strength of nontraditional ideas and creates a space where consensus can be reached. This power for dynamic change can only be achieved when people feel free to make contributions that reflect their uniqueness and when their intellectual diversity is not, as Yoshino says, “covered.”

Finally, once an institution has embraced diversity as a strategic goal, it will need to develop a multicultural action plan (MAP). Institutions must be intentional about their diversity goals and have a specific strategy — a MAP — for achieving them. By asking themselves critical questions, they can examine the impact demographic shifts will have on their vision, mission, and key constituencies.

Inclusive Visioning suggests that institutions benefit when they do not just allow room for diverse voices to be heard but also allow those voices to shape the very fabric of their institution.

Sylvia Gail Kinard, Esq., is the chief diversity officer for Medgar Evers College at The City University of New York.
Colleges Consider New Policies in Light of Supreme Court Ruling on Same-Sex Marriage

By Tannette Johnson-Elie

Many colleges and universities are compliant with the recent U.S. Supreme Court ruling legalizing same-sex marriage throughout the nation, but religiously affiliated colleges that are against gay unions are under particular pressure to conform, experts say.

The Supreme Court ruled in June that marriage is a constitutionally protected right that same-sex couples can exercise in all 50 states. In the landmark 5-4 decision, written by Justice Anthony Kennedy, the high court ruled that the U.S. Constitution guarantees marriage and its “constellation of benefits” to same-sex couples.

In his nine-page dissent, Justice Antonin Scalia called the majority opinion “a judicial Putsch [i.e., a violent attempt to overthrow a government] that poses a threat to American democracy.”

Meanwhile, gay marriage supporters lauded the Supreme Court ruling as an important step toward progress in the fight for marriage equality.

“This decision stimulates an ongoing movement, and it will continue the discussion and work within the academy to make LGBTQ rights more fully realized for the whole country,” says Raymond Crossman, president of Adler University in Chicago and co-chair of LGBTQ Presidents in Higher Education, a network of out college and university presidents.

With the ruling in place, questions are being raised about how it will affect colleges and universities — especially religiously affiliated ones that oppose same-sex marriage — and how they will adjust their policies. Many colleges and universities already recognize benefits for same-sex partners, such as those in states that had legalized same-sex marriage prior to the Supreme Court’s ruling.

Nevertheless, Christian colleges face an uncertain future, and many are fearful of losing their tax-exempt status, accreditation, and federal and state benefits if they abide by their religious principles on what constitutes marriage.

While religious institutions won’t be forced to alter their beliefs and practices, they could face legal challenges if they refuse to provide the same benefits to employees in gay unions as they do for married heterosexual employees, says Frank Ravitch, a professor at Michigan State University College of Law.

“Religious institutions won’t be required to perform [marriage] ceremonies they don’t believe in. It won’t happen, because the IRS and the government would have to make a conscious decision to say we’re not going to allow you to follow your religious mission,” Ravitch says. “The bigger issues are benefits and hiring.”

While some scholars don’t believe the June ruling will result in widespread legal battles, how the issue eventually plays out for colleges and universities may vary from state to state, says Robert Tuttle, a professor of law and religion at George Washington University in Washington, D.C.

“You’ve got to look at state and local anti-discrimination laws because that’s where protection with respect to sexual orientation would come from,” Tuttle says. “Half of the states have some form of protection for sexual orientation, half of the states don’t. In those states that have strong prohibitions against discrimination based on sexual orientation, I see the potential for legal battles.”

In the wake of the Supreme Court ruling, some Christian colleges across the nation are updating their policies.

In mid-July, Eastern Mennonite University and Goshen College expanded their anti-discrimination policies to allow married, gay faculty to
work at their institutions. The schools were among Christian colleges that previously only recognized heterosexual marriages and required that unmarried faculty members be chaste. Both schools are the first members of the Council of Christian Colleges and Universities to adopt such a change, and both institutions are aligned with the Mennonite Church.

For Eastern Mennonite, the rule change follows a June vote by its board to update the school’s policy on same-sex marriage. This decision drew mixed reactions from the limited number of faculty and staff at the university’s Harrisonburg, Va., campus says Andrea Wenger, director of marketing and communications for the university. “For some people, it’s a time of great celebration; they’re very happy and see it as progress,” Wenger says. “For others, it’s a time of disappointment because they don’t see it as within the exercise of their faith. We’ve tried to create an environment where people can feel safe expressing themselves and stay in community together despite their differences.”

Meanwhile, other higher education institutions are addressing the ruling in other ways. In a written statement, Houghton College in New York said it is exploring the implications of the Supreme Court’s decision: “We are actively working with other Christian organizations nationwide, including the Council for Christian Colleges and Universities, to find pathways forward that fully honor the fundamental rights the Constitution has granted to all members of our society — even when those rights are in tension.”

Baylor University in Waco, Texas, the largest Baptist university in the U.S., has dropped specific references to homosexual acts from its sexual conduct policy, although its website still maintains “purity in singleness and fidelity in marriage between a man and a woman as the biblical norm.” The university board of regents approved the removal of language regarding homosexual acts from the policy in May. With the ruling still front of mind for U.S. colleges and universities, many questions have yet to be answered, especially in regard to its effect on private Christian colleges. However, Ravitch says, the solution itself should be apparent. “The Supreme Court didn’t say religious institutions have to change their doctrines. At the same time, religious institutions aren’t going to be able to fire every LGBTQ employee without having a threat to their tax-exempt status,” he says. “The reality is we’re going to settle into something of a middle ground.”

Tannette Johnson-Elie is a contributing writer for INSIGHT Into Diversity.
As science, technology, engineering, and mathematics (STEM) professionals work to advance innovation in the U.S., another nationwide battle is taking place within higher education: the struggle to increase representation of minorities and women in the STEM workforce.

According to 2013 data from the U.S. Census Bureau, the STEM workforce is composed of 7 percent Hispanics and Latinos, 6 percent African Americans, and 0.4 percent Native Americans and Alaska Natives, while men make up a majority of the overall workforce at 74 percent. This underrepresentation also exists in higher education: For example, in 2009, African Americans received 7 percent of all bachelor’s degrees awarded in STEM, 4 percent of all master’s degrees, and only 2 percent of all PhDs, based on data from the National Center for Education Statistics.

However, many institutions are fighting this unfortunate truth by providing opportunity to deserving students, regardless of their financial situation, thereby paving the way for an upsurge in diversity in STEM fields.

An example is the Fisk-Vanderbilt Master’s-to-PhD Bridge Program, co-founded in 2004 by Vanderbilt University astronomy and physics professor Keivan Stassun and professor of physics David Ernst, as well as Fisk University professor of physics Arnold Burger. The program is designed to address the unfair process of filtering out students for STEM PhDs.

Students with an undergraduate degree in physics, biology, chemistry, computer science, math, or another science discipline who would like to pursue a PhD but require additional coursework, training, or research experience are eligible to apply for the program.

Admitted students attend a full-time, two-year master’s program at Fisk in the areas of physics, chemistry, biology, or another science discipline. Once they complete the master’s, they begin their PhD track at Vanderbilt. After their first year, students are able to transfer to another institution to complete their PhD. As long as students uphold university standards and maintain good grades and behavior, their education is fully funded from their first day of class until they receive their diploma; this includes a financial guarantee from the admitting
CONGRATULATIONS

Alycia Marshall, Ph.D., mathematics department chair, for being named one of 100 Inspiring Women in STEM by INSIGHT into Diversity magazine.

You have inspired a new generation of young women to redefine their futures through a career in science, technology, engineering and math.

PhD program, should students choose to transfer, Stassun says.

Instead of relying on GRE scores alone, the program admits students based on demonstrated character and determination. Both Fisk and Vanderbilt faculty are involved in everything from admissions committee decisions and disciplinary committees to mentoring and advisory boards.

“A study came out that showed that of the underrepresented minority students in STEM fields, 50 percent were more likely than their non-minority peers to get a PhD through a master’s degree,” says Stassun, who is also a Bridge Program mentor. “[And] it was becoming clear that the way in which GRE scores were traditionally used to filter out applicants to PhD programs was filtering out the vast majority of students [who were] otherwise qualified.”

Stassun says that while the GRE can pick up on certain skills, it is unable to detect grit — the strength of an individual’s character — which he believes to be equally, if not more, important.

“The GRE can’t read traits like perseverance, experience with failure, working through adversity, and communication and networking skills — things that make up the people [who have] the grit to get through a PhD program,” Stassun says.

While these students may need more help than their peers — which faculty at Fisk and Vanderbilt provide — Stassun believes their ambition and tenacity provide them with the resolve to complete the program.

PhD Performance

Though hugely successful now, the Bridge Program had a difficult start. Many of Stassun’s colleagues were unsure whether incoming students were PhD material.

“In the first two years, colleagues questioned the students we were bringing in … because, on paper, they didn’t look like traditional candidates,” Stassun says. “But once they saw these students were performing at or above our standard of excellence, we saw a real change in attitudes.”

The program has helped many students succeed, and some have gone on to achieve impressive feats. Fabienne Bastien became the first African American woman to be published in Nature for her paper on astronomy and is now the first African American to have received NASA’s Hubble Fellowship; Jedidah Isler is the first

PhD program, should students choose to transfer, Stassun says.

Instead of relying on GRE scores alone, the program admits students based on demonstrated character and determination. Both Fisk and Vanderbilt faculty are involved in everything from admissions committee decisions and disciplinary committees to mentoring and advisory boards.

“A study came out that showed that of the underrepresented minority students in STEM fields, 50 percent were more likely than their non-minority peers to get a PhD through a master’s degree,” says Stassun, who is also a Bridge Program mentor. “[And] it was becoming clear that the way in which GRE scores were traditionally used to filter out applicants to PhD programs was filtering out the vast majority of students [who were] otherwise qualified.”

Stassun says that while the GRE can pick up on certain skills, it is unable to detect grit — the strength of an individual’s character — which he believes to be equally, if not more, important.

“The GRE can’t read traits like perseverance, experience with failure, working through adversity, and communication and networking skills — things that make up the people [who have] the grit to get through a PhD program,” Stassun says.

While these students may need more help than their peers — which faculty at Fisk and Vanderbilt provide — Stassun believes their ambition and tenacity provide them with the resolve to complete the program.

PhD Performance

Though hugely successful now, the Bridge Program had a difficult start. Many of Stassun’s colleagues were unsure whether incoming students were PhD material.

“In the first two years, colleagues questioned the students we were bringing in … because, on paper, they didn’t look like traditional candidates,” Stassun says. “But once they saw these students were performing at or above our standard of excellence, we saw a real change in attitudes.”

The program has helped many students succeed, and some have gone on to achieve impressive feats. Fabienne Bastien became the first African American woman to be published in Nature for her paper on astronomy and is now the first African American to have received NASA’s Hubble Fellowship; Jedidah Isler is the first
African American woman to receive a PhD in astronomy from Yale University; and Aaron Juarez and Jonathan Florez both won the prestigious National Science Foundation (NSF) Graduate Research Fellowship. “We helped them get through,” says Dina Stroud, executive director of the program. “Jedidah would not have been accepted into Yale without preparation from the Bridge Program, and Fabienne wouldn't have been given the opportunity to shine with cutting edge research.” Since its inception, 94 students have enrolled in the program: 54 African Americans; 23 Hispanics; and four Native Americans, Pacific Islanders, or Native Hawaiians. Of these 94 students, 18 have gone on to receive their PhDs — 83 percent of whom were minority students and 50 percent of whom were women.

“At the end of the day, we don’t care if students are successful on multiple choice questions. It’s about who will be successful in the labs.” — Keivan Stassun, co-founder of the Bridge Program

Thanks to grants from the NSF, NASA, the National Institutes of Health, the U.S. Department of Energy, Department of Defense, and Department of Education, the program has grown exponentially. When it began 11 years ago, only two students enrolled. Last year, 17 students were accepted out of more than 100 applicants. Since its inception, 94 students have enrolled in the program: 54 African Americans; 23 Hispanics; and four Native Americans, Pacific Islanders, or Native Hawaiians. Of these 94 students, 18 have gone on to receive their PhDs — 83 percent of whom were minority students and 50 percent of whom were women.

“Look at what you’ve done! Look at the paper you just wrote!” he says. “They deserve to be here.”

More than 300 undergraduate, graduate and professional programs, including law and medicine
More than 41,000 undergraduate and graduate students in 16 colleges
More than 6,000 faculty and staff

A dynamic, competitive, elite research institution, Florida State University is world-renowned for the quality of its faculty, academic programs and a focus on developing graduates who are innovators and leaders.

Florida State is proud of its rich heritage and core values that champion excellence. From top national rankings in the sciences and a thriving technology transfer sector to internationally celebrated programs in the fine and performing arts, Florida State’s service-learning mission continues to be a model for the nation.

fsu.edu | hr.fsu.edu/diversity

FLORIDA STATE UNIVERSITY
UCLA Health
and the
David Geffen School of Medicine at UCLA
Congratulate

Sherie Morrison, PhD
Kelsey Martin, MD, PhD
Judith Gasson, PhD
Marie Francoise Chesselet, MD, PhD

and

all the 100 Inspiring Women in STEM Award Honorees

Your dedication and commitment to mentoring the next generation of women and URM in STEM inspires us all
Improving Recognition Through Awards: How to Mitigate Bias in Awards

By Heather Metcalf, PhD

Regardless of whether one’s STEM career pathway is in academia, government, or industry, awards are important indicators of career success. Awards are influential in decisions regarding recruitment, hiring, promotion, recognition, and tenure. Despite their critical role in shaping career trajectories and attracting a diversity of young scholars to STEM fields, without careful attention, awards allocation processes may perpetuate gender stratification.

As part of our efforts to drive positive, systemic change in STEM through research and advocacy, the Association for Women in Science (AWIS) has conducted longitudinal research on awards allocation processes with 18 STEM disciplinary societies that have a combined membership of nearly 500,000 scientists and mathematicians. Our research shows that while women’s receipt of professional awards overall has increased in the past two decades, men win a higher proportion of scholarly awards, and women win a higher proportion of teaching and service awards than expected, based on their respective representation in the nomination pool. In addition, women won particularly few scholarly awards when “women-only” awards were available. The accompanying graphs illustrate these trends over time by disciplinary group.

The argument is frequently made that the reason so few women receive research and scholarly awards is that the pool of potential nominees is so small, but the data suggest otherwise. Instead, our data, paired with decades of research in the social sciences, suggest that unconscious biases are influencing gender equity in awards.

Unconscious biases — social stereotypes held by both men and women — de-value women’s intellectual achievements and praise their communal and caregiving contributions. Pervasive, harmful social stereotypes remain in the media, including advertisements, and in public commentary of prominent figures in STEM, highlighting the myth that men are inherently better mathematicians and scientists than women.

These messages become internalized and manifest as biases that occur unconsciously, without malice or intention, yet they have significant consequences for women’s career outcomes in STEM. In just one example among dozens of empirical studies on unconscious bias, Yale University researchers asked science faculty to evaluate applications for a lab manager position. Applications that were randomly assigned masculine names were rated as significantly more competent and employable, were offered a higher starting salary,
and were presented with more career mentoring opportunities compared with identical applications that were assigned feminine names. Despite significant achievements of women in STEM over the decades, their lack of recognition for those accomplishments reflects and perpetuates these biased attitudes by making notable men in STEM the primary focus.

Gender disparities in scholarly recognition and feminization of teaching and service awards can hinder women’s advancement and leadership. To address these disparities, AWIS has worked with each participating society to develop contextualized strategies to address unconscious bias in their awards allocation processes and to pinpoint ways to mitigate its injurious effects. Here are a few:

- **Recognize unconscious biases:**
  Because we organize our social worlds by categorizing, everyone has unconscious biases. Recognizing our biases and bringing them into our conscious awareness allows us to intervene before those biases dictate our behaviors and to align our intentions and actions more mindfully. Research has shown that perceiving ourselves as objective, rather than being willing to see the biases that we carry, correlates with showing even more bias. Training workshops for committees and individual assessments like Harvard’s Implicit Association Test help identify bias before it has the chance to influence behavior, allowing for more objective outcomes.

- **Pay attention to language:** Small differences in language can have significant impacts. Gendered language in nomination materials, award titles, or solicitation phrasing might imply that an award is intended for one group and not another and may subtly discourage non-conforming nominations. Committees should carefully select their words, explicitly define evaluation criteria, and recognize gendered language in nomination materials. Nominators and nominees can be aware of how language in nomination materials could influence the evaluation process.

- **Develop a diverse pool of nominees:** Women and minorities are judged most fairly when they comprise at least 30 percent of the nominee pool. Disseminating materials through a variety of means and media and to diversity-related committees and caucuses can deepen nominee pools. In developing your nomination pool, pay attention to the role that gender socialization plays in self-promotion and self-nomination. Women are not only socialized to avoid self-promotion, but because of gender biases, they are also negatively evaluated by their peers for self-promoting.

- **Create clear, consistent, and transparent evaluation processes:** Clearly defining and prioritizing evaluation criteria helps facilitate
objective committee discussions during the evaluation process. Transparency in the evaluation process creates space for potential inequities to be addressed before final decisions are made.

Collaborations among AWIS and professional societies using these research-based tips have proven effective in improving equitable outcomes. However, sustainable change requires persistent effort over time. As Figure 4 illustrates, without repeated and intentional efforts, it becomes easy to slip into unconscious patterns that have been part of the organizational culture for too long. Turnover on awards committees requires that lessons learned be passed along in meaningful ways so that changes in processes become the new cultural norm of the organization. As we continue this work, the visible shifts so far demonstrate the necessity and efficacy of these continued endeavors.

Heather Metcalf, PhD, is the director of research and analysis at the Association for Women in Science. For more information, visit awis.org.

Figure 4

![Value of Continued Interventions Graph](image)

- % Women Biological and Life Sciences Scholarly Awards
- % Women Mathematical Sciences Scholarly Awards
- % Women Physical Sciences Scholarly Awards
- % Women Biological and Life Sciences Tenure-Track Faculty
- % Women Mathematical Sciences Tenure-Track Faculty
- % Women Physical Sciences Tenure-Track Faculty

*Award cycle following intervention
At Northern Arizona University, diversity matters.

The proof? Our students, faculty, and alumni are making a real difference in STEM.

They are researchers. Mentors. Innovators.

Serra Hoagland
PhD in Forestry, ’15
Biological Scientist and Co-Point of Contact for Tribal Relations, U.S. Forest Service Southern Research Station
Graduate Student Observer for the Indian Forest Management Assessment Team
nau.edu/hoagland

Martin Casado
BS in Computer Science and BS in Engineering, ’00
Senior Vice-President and General Manager at VMware
A Forbes Next Gen Innovator
nau.edu/casado

Diana Elder, PhD
Associate Professor in Geomorphology
Associate Dean for Academic Affairs
nau.edu/elder

Join us and make a difference. nau.edu/diverse-careers
Benefits of OU Engineering Bridge Program Stretch Beyond Summer

By Rebecca Prinster

The University of Oklahoma (OU) has a long history of supporting minority students majoring in engineering. The College of Engineering’s Multicultural Engineering Program (MEP), which works to recruit and retain minorities and women, was founded in 1981 (although, at that time it was called the Minority Engineering Program).

Recognizing the challenges these students face upon arriving at a predominantly white campus like OU, the MEP developed a summer bridge program in 2007 to help students form a community with their peers and prepare them academically before the start of their first semester. OU’s College of Engineering has also used the program as a valuable recruiting tool.

The summer bridge program, sponsored by AT&T since 2008, was designed with minority, low-income, and first-generation students in mind, but all incoming freshmen who plan to major in engineering are welcome to apply. To facilitate team and community building, participation is limited to 50 students.

During the four-week program, students enroll in a math course — which has counted for college credit since last year and is funded by Dolese Bros. Co. — and an introductory non-credit chemistry class. Additionally, they complete a Rube Goldberg project every day, which Lisa Morales, executive director of the diversity and inclusion program and the MEP at OU, says is “the exact opposite of engineering” because it involves building a contraption that makes a simple task difficult. In the evenings, engineering upperclassmen provide tutoring, and faculty and staff lead professional development seminars.

Thanks to a $1 million gift from AT&T, the cost per student for the program is only $400 and includes lodging, tuition, and meals. The fee has remained the same since the program began.

Morales says the program originated as a way to ensure that underrepresented minority students enrolling at OU were prepared for the rigorous coursework of an engineering major.

“There was a problem with kids not being math-ready out of high school, and we knew the schools were failing students,” Morales says. “We wanted to ensure students had a successful transition into the engineering program. And we know that poor-performing high schools are often in poorer socioeconomic areas and that those students are mostly underrepresented minority students.”

To get them on the same level as their peers, participants are placed into College Algebra, Pre-calculus, or Calculus I, depending on their incoming ability. In the 2014 summer cohort, 100 percent of the 39 students advanced at least one level in math by the time they reached
CONGRATULATIONS!

We are proud of Drs. Gail Gasparich and Clare Muhoro – two of the nation’s top 100 women in STEM – and their efforts to inspire women and students of color to pursue STEM careers.

At Towson we reach higher. We strive for more. We are the next 150.

towson.edu/fcsm

Rebecca Prinster is a senior staff writer for INSIGHT Into Diversity.
Non-Cognitive Competencies in Graduate Admissions: Enhancing Validity and Diversity

By Casey W. Miller, PhD

Although the importance of diversity in STEM graduate education is rising in the U.S. — notably with commentary from National Science Foundation leadership — the standard graduate admissions process is lagging behind the rhetoric.

Julie R. Posselt’s work at the University of Michigan has shown that most graduate admissions requirements include the GRE exam, and many admissions committees require a minimum score for admission.

Unfortunately, these tests reveal strong race and gender differences. For example, the percentage of women who make it over a 64th percentile cutoff is only 38 percent, while it is 58 for men; 62 percent of Asian Americans and 53 percent of whites pass this cut, but only 24 percent of all underrepresented minorities (African Americans, Hispanics, and Native Americans) meet or exceed this percentile. These differences can significantly affect the representation in STEM graduate programs. For instance, relative to the demographics of test takers, a 64th percentile cutoff shrinks the number of women by 25 percent and inflates the percentage of men by 14; the number of Asian Americans and whites are inflated by 22 percent and 6 percent, respectively, while the representation of underrepresented minorities is reduced by 47 percent. Consequently, admissions protocols using minimum acceptable scores will disproportionately filter out underrepresented minorities and women.

It is important to note that these score differences do not depend much on undergraduate GPA or undergraduate major: Students with GPAs in the A range show the same race and gender gaps. In fact, these score differences exist on all standardized exams down to fourth grade math achievement tests. The Educational Testing Service (ETS), which administers the GRE, suggests that the score differences are rooted in educational opportunity and access early in life, which raises the question: Should the zip code of your grammar school determine whether you are able to attend graduate school?

Ironically, the admissions process that indiscriminately filters women and underrepresented minorities out of the applicant pool doesn’t work better than random chance in identifying students who will actually earn the PhD. Indeed, the Council of Graduate Schools has shown that the seven-year PhD completion rate in STEM fields is only 52 percent.

Fortunately, there is hope for simultaneously addressing both of these issues. Decades of management and industrial-organizational psychology research have shown that non-cognitive competencies, or non-cogs, can enhance both validity and diversity in selection processes.

Non-cogs are psychological constructs that help us successfully navigate life; examples include conscientiousness, achievement orientation, initiative, trustworthiness, adaptability, emotional self-control, and optimism.

Non-cogs are psychological constructs that help us successfully navigate life; examples include conscientiousness, achievement orientation, initiative, trustworthiness, adaptability, emotional self-control, and optimism — all qualities I would love to see in my students, my colleagues, and myself. Importantly, non-cogs do not show measurable differences based on race, gender, culture, or language. Researchers, such as Richard Boyatzis from Case Western Reserve University, have concluded that cognitive ability and disciplinary knowledge
are thresholds; they are necessary but insufficient for outstanding performance. It is these non-cognitive competencies that separate exemplars from the subpar, the finishers from the non-finishers. The Council of Graduate Schools recently announced a program to further explore these concepts in graduate admissions.

It is clear that to begin addressing diversity in graduate education on a large scale, the standard admissions protocol needs to be altered. Despite their clear potential, non-cognitive assessments are presently difficult to use with no standard protocols. Admissions committees typically perform disorganized evaluations of letters of recommendation, personal statements, and in some fields, interviews. This attempt at holistic evaluation, unfortunately, is applied to only a small fraction of the applicant pool — those who passed the minimum GRE hurdle — because it takes a lot of the faculty’s time.

For non-cogs to become widely adopted, their evaluation must be as easy as that of GPA and test scores. Social scientists can help in this regard through the design of Situational Judgment Tests to measure non-cogs (with surprisingly few questions), which result in a set of simple scores. These could be administered at the time the application is submitted. To assess non-cogs evident in written application materials, social scientists can help develop rubrics to make the evaluation more efficient and robust. Rubrics increase fairness, mitigate implicit bias, and combat reviewer fatigue by ensuring all factors are assessed for each applicant.

Using non-cognitive constructs will be integral to helping diversify STEM graduate education. They uniquely offer both a lack of gaps between different demographic groups and the ability to predict performance in their own right. Non-cogs will thus lower barriers to participation for women and underrepresented minorities while enhancing the validity of the currently poor admissions process used by many STEM graduate programs. Their inclusion has the potential to revolutionize the graduate admissions process along the path to meeting national goals for diversity in STEM.

Casey W. Miller, PhD, is a professor and the director of the Materials Science Engineering Program at Rochester Institute of Technology. Funding for this project came from the National Science Foundation and Rochester Institute of Technology’s Division of Diversity and Inclusion.
STEM Dean Roundtable

By Alexandra Vollman
INSIGHT Into Diversity recently spoke with three female deans of science, technology, engineering, and mathematics (STEM) schools. These women provided insight on the critical need to increase the number of women in STEM professions and improve math and science education for our nation’s youth.

Nada Marie Anid, PhD, is the first female dean of the New York Institute of Technology’s (NYIT) School of Engineering and Computing Sciences. In this role, she oversees nearly 80 faculty members and 3,500 students at five NYIT campuses. She currently holds leadership positions in several organizations, including the American Institute of Chemical Engineers and the American Society for Engineering Education.

Maria V. Kalevitch, PhD, is the dean of Robert Morris University’s (RMU) School of Engineering, Mathematics, and Science, as well as a professor. She began as the only female faculty member, went on to become the founding chair of the science department, and is now the school’s first female dean. She also serves on the university’s Diversity and Inclusion Committee and is a member of the Women in Engineering Leadership Institute and the New York Academy of Sciences.

Debra Larson, PhD, PE, is the dean of the College of Engineering at California Polytechnic State University (Cal Poly), San Luis Obispo, where she is also a professor. She began her career as a civil and structural engineer and went on to serve in various positions at Northern Arizona University prior to joining Cal Poly. She provides national service to the American Society for Engineering Education and the Accreditation Board for Engineering and Technology.

According to a recent report from the National Student Clearinghouse, the number of women pursuing degrees in STEM fields dropped across the board from 2004 to 2014. The most significant decline was in computer science, which fell from 23 to 18 percent in that time. Where should efforts be focused in order to entice more women to pursue STEM degrees?

Kalevitch: I think [this] has implications both nationally and internationally. I strongly believe it starts with education, and education should go as far as elementary school. And we shouldn't forget family; education of parents is also essential. They are the ones who are [usually] paying for the student’s education, and they are also … fully involved in decision making. We need to educate about many things, including career options.

The preparation of our teachers is also essential. If we look at the many educational problems we have in this country, [teachers] may not have enough content. Diversity is essential, but if you do not have content, that’s a limitation. This is something that I think we need to look into — and we are, but nevertheless, we have a very long way to go.

Larson: [At] Cal Poly, we’re different from that. Our computer science department is actually seeing growth in the number of women. We’re starting to see an uptick in first-time freshmen who are accepting our offers of admission.
In the fall of 2010, only 9 percent of the offers of admission to come to Cal Poly [to study] computer science were women. For the fall of 2015, which is the last set of reliable data I have, we had 23 percent of women accepting our offer to study computer science. And the same phenomenon is going on with software engineering; 20 percent of the women are accepting.

So what are we doing that is different? We have a leader in [the computer science] department, the department chair, who has taken this issue on, to increase the opportunities for women to study computer science. He’s very active in building structured communities. He’s created a group called Women in Software and Hardware, better known as WISH. And that has been helpful in supporting and developing a community of young women in computer science.

What we’ve been finding is that being part of a community and being able to have opportunities to work collaboratively and to have mentors helps.

Anid: We have to think about it as a pipeline problem. If we want to make a difference, we have to start at the primary school, middle school, and high school levels. So if we want more women graduates four years from now, five years from now, and so forth, we have to work backwards 13 years; that’s kindergarten.

“If we want more women graduates four years from now, five years from now, and so forth, we have to work backwards 13 years; that’s kindergarten.” Nada Marie Anid

No significant progress has been made in the last 15 years in the number of women pursuing technology and engineering, and computer science has seen a decline. The American Society for Engineering Education is calling this year the year of diversity. We’re coming up with an implementation plan with the hope of making a difference, using the approach I just mentioned.

“Imposter syndrome” is a phrase I often hear associated with women in STEM fields and refers to the phenomenon in which a person experiences feelings of inadequacy and inferiority in the workplace — even when those feelings have proven false. Do you believe this often affects women in STEM professions, and if so, why do you think women in these occupations struggle with feelings of self-doubt in regard to their role and abilities in the workplace?

Kalevitch: These things are really common to all human nature. We have this striving for perfection, but we also have very strong self-doubt. I think having mentorship and guidance along the way is really something that helps to sort of inoculate your self-confidence. … I think a network of mentors and people you can go to who can guide you is essential to building self-confidence.

But I think all of us, both men and
women — but women probably more — have experienced this type of feeling and this struggle.

Larson: I think the competitiveness that naturally comes with being a man is what contributes to imposter syndrome. But we found something out at Cal Poly that I think is really important, and I think it helps [inform] how we can help people be more successful in moving through self-doubt. We did a study about two years ago … and surveyed incoming female engineering students — and when I say engineering, I also mean computer science.

One of the surprising statistics that came out of this was that 68 percent of the young women who had come to Cal Poly to study in the college of engineering had participated in sports.

Anid: This decline in self-confidence — and many studies have shown this — starts at age 11, when puberty hits. That’s when [girls] lose their confidence, and that’s when you see a drop in performance in math. Also, especially in college. [For example], I went to college in Stockholm, which is a very forward-thinking country in terms of women’s rights; we would be solving a problem — there were very few girls in the classroom — and the boys would say, “Oh, are you sure your answer is correct?” I had to repeat what I had done; they would never trust my work. And my work was right from the beginning. It toughens you. That kind of taught me how to react in these situations, and by now, I can convey this to others and make them feel stronger.

According to ACT test result data, only 44 percent of 2013 U.S. high school graduates were ready for college-level math, while only 36 percent were prepared for college-level science. Also, according to data in middle school, [there are not as many] math and science teachers who are female, and they’re not trained to talk to these middle school girls. That makes this syndrome even more pronounced, and it stays with them.

So we’ve drawn some conclusions around the importance of sports and extracurricular activities in helping our diverse student body with being more confident and more comfortable in this environment of engineering. But I also think things like music, dance, art, leadership, and other extracurricular activities can be as important as sports; it’s a “secret sauce” helping students retain and persist within an engineering field. It’s particularly relevant when you’re talking about students who are coming from diverse backgrounds, but it works for male students as well.

So when the teacher asks a question, they’re not going to be the first ones to raise their hand. They need to be certain of what they’re saying before they speak. So by the time they think and say something, three boys have already given the answer. That promotes self-doubt and a lack of self-confidence, and it perpetuates it.

It takes a while to assert oneself, especially in college. [For example], I went to college in Stockholm, which is a very forward-thinking country in terms of women’s rights; we would be solving a problem — there were very few girls in the classroom — and the boys would say, “Oh, are you sure your answer is correct?” I had to repeat what I had done; they would never trust my work. And my work was right from the beginning. It toughens you. That kind of taught me how to react in these situations, and by now, I can convey this to others and make them feel stronger and help them react — and act.

“We need to have the parents involved. I don’t feel like we have a societal understanding about ... STEM professions — what they take and what’s so important and great about these careers.” Debra Larson

According to ACT test result data, only 44 percent of 2013 U.S. high school graduates were ready for college-level math, while only 36 percent were prepared for college-level science. Also, according to data in middle school, [there are not as many] math and science teachers who are female, and they’re not trained to talk to these middle school girls. That makes this syndrome even more pronounced, and it stays with them.

It’s not just in STEM, but it’s more pronounced in STEM. I see it now, and oftentimes when I go to classrooms, there [is] only one girl. Research also shows that girls are more careful and less assertive; they don’t take risks. So when the teacher asks a question, they’re not going to be the first ones to raise their hand. They need to be certain of what they’re saying before they speak. So by the time they think and say something, three boys have already given the answer. That promotes self-doubt and a lack of self-confidence, and it perpetuates it.

It takes a while to assert oneself, especially in college. [For example], I went to college in Stockholm, which is a very forward-thinking country in terms of women’s rights; we would be solving a problem — there were very few girls in the classroom — and the boys would say, “Oh, are you sure your answer is correct?” I had to repeat what I had done; they would never trust my work. And my work was right from the beginning. It toughens you. That kind of taught me how to react in these situations, and by now, I can convey this to others and make them feel stronger and help them react — and act.

“We need to have the parents involved. I don’t feel like we have a societal understanding about ... STEM professions — what they take and what’s so important and great about these careers.” Debra Larson

According to ACT test result data, only 44 percent of 2013 U.S. high school graduates were ready for college-level math, while only 36 percent were prepared for college-level science. Also, according to data
from the Pew Research Center, as of 2012, the U.S. ranked 35th out of 64 countries in math and 27th in science. How can we better educate our nation’s youth in math and science and prepare them for careers in those fields?

Kalevitch: I strongly believe that we have to look at the root of the problem, which is the type of knowledge and education that we’re giving our teachers, because they’re the ones who go back to the school level to work with the students. So how much content do they have? How much access do they have to hands-on experiences, to cutting-edge technology? How do they teach our students innovation?

There are a lot of things that we need to [consider], because engagement is also a very important piece that often is missing. We’re burdening our teachers with some bureaucratic responsibilities that take away from the teaching-learning process. I don’t have the answers to all of those questions, but I know this is something of importance to many.

Larson: My gut reaction is that we need to have the parents involved. I don’t feel like we have a societal understanding about careers, especially the STEM professions — what they take and what’s so important and great about these careers. But then how does that translate? We have this huge gap in understanding, and I think where that gap often lies is with parents, because they are unfamiliar with what it takes and the kind of study that’s needed, the academic preparation that’s needed for their child to be successful.

We also need to, as a society, honor the profession of teaching more than we do. I think that’s about the kinds of decisions we’re making in terms of public funding of education.

Anid: To me, this starts with the teachers. Take examples of nations that have transformed their rankings — Finland, for example — and look at how much they pay their teachers compared with the U.S., how they train them, and how much they value them. It’s all in how teachers are trained. To me, that will make a difference. We have math teachers who never studied math in college. That’s the sad reality. You take science teachers; they don’t have a science background, but they teach science. So unless we reform the education of our teachers, and we value them by raising their salaries, our ranking will remain the same.

Of all bachelor’s degree students who entered STEM fields between 2003 and 2009, 48 percent switched to non-STEM majors or dropped out during
Dr. Robertson was the first woman hired into a tenure-track position in the Swanson School’s Department of Mechanical Engineering and Materials Science and served as Director of the Graduate Program in Mechanical Engineering from 2004-2008. Dr. Robertson leads a research team that investigates cerebral aneurysms, which are pathological outcroppings of brain arteries that can lead to fatal brain hemorrhages. In 2013 her team was awarded a coveted National Institutes of Health R21 grant to study the link between hemodynamics and wall structure in cerebral aneurysms. The team’s long-term objectives are to establish new pharmacological based treatment methods for cerebral aneurysms and improve clinical treatments that function by altering flow in the aneurysm dome.

Dr. Robertson earned her BS in mechanical engineering from Cornell University and her MS and PhD in mechanical engineering from the University of California at Berkeley, where she was also a President’s Postdoctoral Fellow in the Department of Chemical Engineering.

The Swanson School of Engineering congratulates Anne Robertson, PhD Professor of Mechanical Engineering on being named one of 100 Inspiring Women in STEM by INSIGHT Into Diversity

Dr. Robertson was the first woman hired into a tenure-track position in the Swanson School’s Department of Mechanical Engineering and Materials Science and served as Director of the Graduate Program in Mechanical Engineering from 2004-2008. Dr. Robertson leads a research team that investigates cerebral aneurysms, which are pathological outcroppings of brain arteries that can lead to fatal brain hemorrhages. In 2013 her team was awarded a coveted National Institutes of Health R21 grant to study the link between hemodynamics and wall structure in cerebral aneurysms. The team’s long-term objectives are to establish new pharmacological based treatment methods for cerebral aneurysms and improve clinical treatments that function by altering flow in the aneurysm dome.

Dr. Robertson earned her BS in mechanical engineering from Cornell University and her MS and PhD in mechanical engineering from the University of California at Berkeley, where she was also a President’s Postdoctoral Fellow in the Department of Chemical Engineering.

“...when they feel that someone cares and takes an interest in them.

Larson: Many studies speak to incoming academic preparation as one of the challenges. Being able to have pathways where students can explore different options within STEM is a really helpful way of retaining students in a STEM profession, but not necessarily the one that they choose as a 17-year-old coming out of high school. So flexibility in being able to explore and some flexibility with the actual curriculum and its structure can be very helpful.

Anid: I shared this statistic at a conference in Stockholm, and people were shocked to hear that not only very few [students] enter STEM fields, but then we only retain half of them. So retention and attrition are very important. Based on research, what women and minorities need is mentoring, tutoring, encouragement, and role models. All the support systems are now showing positive results in retaining minorities and women, because we also find that whatever we teach them, they want to have put into context. To motivate them, our teachers need to always add an application to the theory — this is how you use this, this is how this concept changes society. You always have to attach a societal factor to what is taught. That works for these groups.

Alexandra Vollman is the editor of INSIGHT Into Diversity.
Malcolm D’Souza, professor of chemistry and associate dean of interdisciplinary and collaborative sponsored research, oversees Cannon Scholars at work in the Wesley College organic chemistry lab.

Wesley Cannon Scholars Program Provides Support for Low-Income STEM Majors

By Sarah Edwards
When Riza Bautista started as an undergraduate student at Wesley College, a small liberal arts and minority-serving institution in Dover, Del., she decided to study nursing. She was guided by the oft-repeated advice from friends and family to “make these four years count.”

For Bautista, a returning student in her early 30s with a husband and children, the promise of steady employment was attractive. “People told me it’s a guarantee I could get a job,” she says.

But Bautista found herself drawn to numbers; she loves assessing probability and calculating risk. One year into Wesley’s nursing program, she enrolled in several math courses and learned about the range of careers available to mathematics majors. Recalling family and friends’ advice, she decided to truly make her time in college count and changed her major to math.

In the two years since, she has presented research at three symposia, earned six awards and scholarships, and is considering graduate school — a move she says she would have never contemplated before attending Wesley. And she believes it was all made possible because of the university’s Cannon Scholars Program.

The program, launched last year with funding from the National Science Foundation (NSF), is designed to recruit and retain low-income undergraduate students in the science, technology, engineering, and mathematics (STEM) fields. The goals of the program are three-fold: increase the number of underrepresented and financially disadvantaged students graduating with STEM degrees, prepare students to pursue graduate or professional programs, and increase the number of skilled employees in STEM fields.

Particularly striking are the program’s safeguard features, which were structured to ensure student success and developed after years of departmental analysis and evaluation. One such safeguard — funded by the Jessie Ball duPont Fund in 2011 and conducted by higher-education consultants at Credo, a consulting firm serving private colleges and universities in the U.S. — looked at Wesley’s strengths, aspirations, and results regarding retention. The findings were significant: More than 95 percent of students received federal financial aid, and the median adjusted gross family income of students was less than $35,000. The report cited financial insecurity as the main reason for students dropping out of Wesley — powerful data considering that Wesley’s first- to second-year retention rate for 2010-2013 averaged 46 percent.

Malcolm D’Souza, PhD, professor of chemistry and associate dean of interdisciplinary and collaborative sponsored research, says diminishing the financial burden for students was the primary motivation for partnering with the NSF.

“Like Bautista, senior and biological chemistry major Dionne Williams aspired to be a health professional — that is, until her sophomore year organic chemistry class with D’Souza, considered to be the most difficult course in the STEM curriculum. D’Souza remembered Williams as quiet and withdrawn early in the semester. When he learned that she, too, was a first-generation student, he better understood her trepidation and reached out to help. Soon, Williams...
Dr. Tanja Karp and Logeswari Ponnusamy on receiving INSIGHT Into Diversity’s 100 Inspiring Women in STEM Award.

today.ttu.edu

changed her major from biology to biological chemistry. She began assisting with research and ended up earning a NASA Delaware Space Grant College Program tuition award for measuring the reaction rates of chemical compounds used as flame retardants in space suits.

Over the summer, both Bautista and Williams stayed busy doing research projects. Bautista worked with D’Souza to study the impact of obesity on various demographics in Delaware, and Williams, through a hospital internship, studied the risk stratification of newer anticoagulants in patients with traumatic brain injuries.

“At a big university, I never would have been exposed to these things,” says Bautista.

And program participants do more than just research. “Our students have actually co-authored and peer-reviewed publications, which is very unusual for undergraduates. They’re winning national presentation awards for their work,” says D’Souza.

For Cannon Scholars, program participation is both an academic opportunity and a campus experience. Students are encouraged to join living-learning communities and are required to enroll in project-based courses in which they collaborate and build connections with others, including professors.

“STEM faculty are so involved with students, and that’s only made possible with programs like Cannon Scholars,” says D’Souza. “Our class sizes are small. Activities are done together.”

If the first year of the Cannon Scholars Program is any indication of how it will fare in the future, the STEM initiative is in good shape. Of the 27 students originally enrolled in the 2014-2015 cohort, only one is not returning.

“That’s quite a significant success for us because of the [overall] retention rate at the college. We’re at about 90 percent, and that’s a great number,” says D’Souza.

Sarah Edwards is a contributing writer for INSIGHT Into Diversity.
California State University, Los Angeles and The College of Natural and Social Sciences congratulate

Dr. Krishna Foster
Professor
Department of Chemistry and Biochemistry

Insight Into Diversity
Inspiring Women in STEM Award 2015
Help Wanted: STEM Professions Offer Growth and Opportunity

By Alexandra Vollman
In the U.S., occupations in science, technology, engineering, and mathematics (STEM) currently make up more than one out of every 10 jobs and pay wages that are nearly twice the U.S. average, according to data from the U.S. Bureau of Labor Statistics. But even with STEM-related careers projected to add 1 million additional jobs to the U.S. economy by 2022, many positions in these fields continue to go unfilled — revealing a breadth of opportunity for qualified candidates.

“[STEM] is one of the fastest growing occupational [categories] over the next 10 to 15 years. It grows faster than any others, in fact,” says Dr. Nicole Smith, a labor economist for the Center on Education in the Workforce at Georgetown University. “Overall, STEM continues to be a lucrative field and a great opportunity.”

At the Center on Education in the Workforce, Smith and her colleagues look at the U.S. economy to determine demand for specific jobs over a 10-year time frame. While STEM encompasses a variety of disciplines, the projected growth for each occupation varies; for instance, while computer science jobs can expect a tremendous spike in employment in the next several years, some engineering technician jobs are projected to grow very little.

The area Smith believes will see the largest increase in the number of jobs added between 2011 and 2022 is technology — in particular, computing, cyber security, and information technology (IT).

“If I had to really pick the fastest-growing STEM clusters, I would say computers. Software development, software engineers, and app developers are growing fast,” she says.

According to Roger Moncarz, who works in the Employment Projections Office at the Bureau of Labor Statistics, Smith’s assessment is accurate. Based on findings from his office, IT is projected to add jobs in several key areas between 2011 and 2022: software application developers, 218,500 jobs; computer systems analysts, 210,000; and computer user support specialists, 197,000.

In addition, Moncarz says the occupation seeing the most growth within IT is information security analyst, which is projected to increase about 37 percent in the same time period. Of these fast-growing computer professions, U.S. News & World Report deemed three of them the “Best STEM Jobs of 2015,” including software developer at No. 1, followed by computer systems analyst and information security analyst.

“I think, when you look at the STEM fields, the IT occupations have obviously been enjoying very healthy employment growth, and I see no reason for that to slow down in the foreseeable future,” Moncarz says.

Other occupations that can expect job growth include operations research analysts, statisticians, and biomedical engineers, which Moncarz says are all projected to increase 27 percent. Actuaries and petroleum engineers may see a 26 percent boost. While these figures are significant, their scope is limited.

“The caveat with these occupations — with so many of these — is that they’re smaller, and they’re not adding as many jobs; so for example, biomedical engineers are only projected to add about 5,000 jobs,” he says.

Celeste Carter, lead program director for the National Science Foundation’s (NSF) Advanced Technological Education Program, says the U.S. is also seeing more opportunities opening up in other hands-on areas of STEM, including manufacturing.

“I think one [reason for this] has been because of the current administration’s push toward bringing manufacturing back onshore; that’s been advanced manufacturing — everything from rapid prototyping or 3-D printing to … plants in the U.S. looking for qualified technicians,” she says.

Technical Education
Careers in STEM fields offer a wide range of benefits, including flexibility, high salaries, job satisfaction, and — for those working in math and computing, who saw 21 percent growth even during the recession — job security. But STEM careers can also offer the convenience of an easily accessible and affordable education.

According to a 2013 report from the Brookings Institution, nearly half of all STEM jobs don’t require a four-year degree and pay an average salary of $53,000, which is 10 percent higher than non-STEM jobs with similar education requirements.

For Carter, determining where the opportunities are for these STEM...
workers is part of her job. The NSF Advanced Technological Education (ATE) Program she leads partners STEM industries with community and technical colleges across the U.S. to provide funding to meet technical workforce needs.

Industry and community colleges collaborate to submit a proposal to ATE. If selected, the college is awarded funds to follow through with its proposal. Projects can range from revamping curricula to better meet the needs of the industry to developing new programs and certificates based on new and emerging fields.

Carter says that industries often struggle to find candidates with the hands-on skills and technical knowledge they need — skills that an associate’s degree can provide.

“A lot of people come to these community college technician education programs because they’ve tried to get a job in the industry — many of them have either a baccalaureate degree or an enhanced degree — [and] the industry says, ‘You don’t have the competencies and skills, we won’t hire you,’” says Carter. “They certainly have the academic knowledge they need in their head, but what the industry wasn’t seeing was that they had the skills and competencies to actually work in the [field].”

This skills gap is evidenced in a 2011 survey, conducted by the Bureau of Labor Statistics, in which as many as 600,000 manufacturing jobs remained unfilled because of a lack of qualified candidates for technical positions requiring STEM skills.

One reason for this gap, Smith says, could be the negative connotations often associated with these lesser-educated professions. “Part of the problem is the stigma associated with manufacturing or with blue collar work, but these jobs pay very well,” she says.

While STEM technicians’ salaries may be higher compared with those of non-STEM occupations, most of these positions are not witnessing the same growth as jobs that require a bachelor’s degree and above, and they tend to pay less than jobs that require more education.

Among STEM technician jobs, Moncarz says the majority are experiencing slow growth, with mechanical engineering technicians expected to see a 5 percent increase in jobs by 2022; electro-mechanical technicians, 4 percent; civil engineering technicians, 1 percent; and both aerospace engineering/operation technicians and electrical/electronic engineering technicians, zero growth. One two-year degree occupation that is anticipated to grow, however, is Web developer, which is projected to increase 20 percent.

Renewable and sustainable energy is also experiencing increased demand, Moncarz says. Two related professions include wind turbine technician and solar photovoltaic installer, which require minimal schooling and are both projected to increase 24 percent from 2011 to 2022 — although their workforce representation is minuscule.

In addition, Carter says she is seeing increased growth in the biofuel, battery, and hybrid car industries.

Smith believes the continued growth in STEM, and the subsequent demand for qualified workers, provides young people considering careers in those fields an advantage by giving them pathways to explore careers that both interest them and offer significant opportunities.

“You have to find a creative way of balancing your own interests with growing demand in your particular field,” she says. “Very often, you can see there are certain types of occupations that are recession-proof, where even during the worst of times … vacancies still popped up in a particular location or in a particular industry. Those are the ones, if you had to place your bets, [that] might be the best opportunity.”

Alexandra Vollman is the editor of INSIGHT Into Diversity.
Our passion: Educating future engineering leaders...conducting research to address our greatest challenges...using technology to make a difference...celebrating diversity of thought and culture...and creating solutions to make the world a better place.

> 12 undergraduate engineering majors and 5 minors
> 95% placement rate six months after graduation with average starting salary of $62,000
> Internships, learning communities, study abroad, 60+ engineering organizations and hands-on experience help shape student success
> Master’s and Ph.D. programs that allow students to lead innovative research, create knowledge and become experts in their field

www.engineering.iastate.edu

Offering academic programs in
- Integrated Biomedical Sciences
- Cellular and Structural Biology
- Translational Sciences
- Immunology and Infection
- Biomedical Engineering
- Medical Health Physics
- M.D./Ph.D.
- D.D.S./Ph.D.
- Radiological Sciences

Visit gsbs.uthscsa.edu for a full list.

We have a responsibility as scientists to increase diversity in STEM fields.
It takes collaboration to increase diversity.

As the oldest and largest diversity publication in higher education — and creator of the Higher Education Excellence in Diversity (HEED) Award — we strive to advance the conversation on college and university campuses nationwide to inspire action. Join the conversation and show your commitment to diversity and inclusion by advertising in INSIGHT Into Diversity magazine.

View our 2015-2016 editorial calendar at insightintodiversity.com/publication-calendar.

For advertising information, contact Donald Washington at 301.529.9503 or dwashington@insightintodiversity.com.
At *INSIGHT Into Diversity*, we understand the importance of increasing the number of women in the science, technology, engineering, and mathematics (STEM) fields. Through our 100 Inspiring Women in STEM Award, we recognize exemplary women — with excerpts from their nomination letters — who inspire and encourage the next generation of young women to pursue careers in STEM.

Also in this special section, discover interesting facts about the history and future of STEM and the crucial roles that women play.
Inspiring Women in STEM Awards

Jennifer Adam, PhD
Associate Professor in the Department of Civil and Environmental Engineering Washington State University

Through her mentoring of a diverse group of students, Dr. Adam excels at fostering and promoting diversity in her field and beyond. Besides cultivating the next generation of researchers, Adam is the primary investigator (PI) of a regional earth system modeling grant, and she is co-PI on a graduate training program and a grant that seeks to guide hydrology model development through input from stakeholders.

Amy C. Anderson, PhD
Professor of Medicinal Chemistry University of Connecticut School of Pharmacy

In her current role, Dr. Anderson leads a research group focused on the discovery and development of novel drugs for treating infectious diseases and cancer, as well as understanding and overcoming mechanisms of drug resistance. She also trains and mentors young people on the importance of drug discovery, development, and chemical structures in relation to patient outcomes. She holds several patents and has been published in more than 75 publications.

Ann Anderson, PhD
Professor of Mechanical Engineering Union College

Along with her colleague Dr. Mary Carroll, Dr. Anderson established a cross-disciplinary research group at Union College in New York. Under their direction, students and faculty have developed and patented an alternate approach to preparing aerogels, published multiple peer-reviewed papers in scientific journals, and secured more than $1 million in research grants. Through her leadership and guidance, Anderson has inspired many students to continue their education.

Nada Marie Anid, PhD
Dean of the School of Engineering and Computing Sciences, New York Institute of Technology (NYIT)

As the first female dean of engineering at NYIT, Dr. Anid has partnered with corporations to offer scholarships for NYIT women in engineering and computing and has provided professional mentorship to female students in STEM fields. To create a pipeline for prospective students, Anid has developed programming for high school students in conjunction with Girls Inc., the Girl Scouts, and the Cradle of Aviation Museum.

Julie Beckstead, PhD
Professor of Biology Gonzaga University

Dr. Beckstead collaborates with the School of Education to identify ways to meet the requirements for pre-service teachers seeking a science endorsement, and she is working to create a STEM Teaching Scholars Program at Gonzaga. Her interest in promoting interdisciplinary courses led to the development of an environmental studies major; she also helped develop a sustainable business minor at Gonzaga, thus exposing even more students to science education.

Holly Bevsek, PhD
Department Head of Chemistry The Citadel Military College

Dr. Bevsek is committed to her work and, most importantly, her students, as she strives to inspire curiosity about the world in all of them. She is a strong supporter of undergraduate research and has served as an adviser to many of her students. She has worked in the laboratory of 1986 Nobel co-laureate professor Yuan T. Lee and is currently researching gas-solid particulate reactions in the terrestrial and Martian atmosphere.

Canan Bilen-Green, PhD, CQE
Vice Provost for Faculty North Dakota State University (NDSU)

As primary investigator of the National Science Foundation-funded FORWARD program at NDSU, Dr. Bilen-Green oversees training, outreach, and policy change focused on gender equity and institutional transformation to help advance women in STEM. For her work, including ensuring fair and transparent promotion and tenure procedures for all faculty, she received the Women in Engineering Program Advocates Network’s University Change Agent Award.

Susan Blaser
Lineman Program Coordinator Metropolitan Community College – Business & Technology Campus

Working with Kansas City Power & Light, Blaser became the first female lineman at the company and in the entire state of Missouri. As a professor in the Electric Utility Line Technician Program at the college, she advocates for women and encourages them to enter this difficult but high-paying profession. She also inspires young people who visit campus with interactive and educational tours of her program.
Cynthia Brossman
Director of the Learning Resource Network
Boston University

For 23 years, Brossman has encouraged women to pursue careers in STEM. Her work includes creating a residency at Boston University for female freshmen STEM majors and a network for female graduate students, co-founding the Boston Area Girls’ STEM Collaborative, and creating two programs: Summer Pathways and The Artemis Project. Through these, she exposes high school girls — particularly those from low-income and minority backgrounds — to STEM through hands-on activities.

Evelyn Brown, PhD
Professor in the Department of Engineering
East Carolina University (ECU)

As an advocate for diversity, Dr. Brown has worked to support women and underrepresented minorities in STEM disciplines. Her accomplishments include creating the STEM Girls program at ECU, which brings 100-plus middle school girls to campus to learn about STEM careers and interact with faculty; establishing the university’s Society of Women Engineers; and, as a member of the North Carolina FIRST Robotics Board of Directors, increasing young people’s interest in robotics.

Maya Byfield, PhD
Professor of Biology
Seminole State College of Florida

As head of Seminole’s STEM research course since 2010, Dr. Byfield has been the driving force behind this highly selective honors course. She also helped launch a dual-enrollment engineering program at a nearby high school, increasing participation from 14 students to 453 in two years. Byfield has been working with two dual-enrolled teenagers on a team of University of Central Florida scientists, studying how technology aids in the fight against autism and Alzheimer’s disease.

Janey Camp, PhD, PE, GISP
Research Assistant Professor
Vanderbilt University

Dr. Camp is a licensed professional engineer and is studying the interactions of nature and man-made systems. She serves as faculty adviser to the Vanderbilt chapter of Engineers Without Borders, was appointed to the American Society of Civil Engineers’ National Committee on America’s Infrastructure, and was a 2011 recipient of the Young Engineer of the Year Award and a 2014 Nashville Emerging Leader Award Finalist in Environment and Sustainability.

Mary Carroll, PhD
Professor of Chemistry
Union College

Along with her colleague Dr. Ann Anderson, Dr. Carroll established a cross-disciplinary research group at Union College. Under their direction, students and faculty have developed and patented an alternate approach to preparing aerogels, published multiple peer-reviewed papers in scientific journals, and secured more than $1 million in research grants. Through her leadership and guidance, Carroll has inspired many students to continue their education.

Shraddha Chaplot
Greengineer and Machinengineer
Cisco Systems, Inc.

At Cisco, Chaplot first served as a hardware engineer and a greengineer when she built and led Cisco’s Energy Star Compliance test lab. In her current position, she serves as a machinengineer on Cisco’s Corporate Social Responsibility team conducting Internet of Everything (IoE) experiments. She has received numerous recognitions and awards for her work as a mentor and leader, sharing her love of STEM and the arts (STEAM) with others.

Marie-Francoise Chesselet, MD, PhD
Professor of Neurology, David Geffen School of Medicine at UCLA

Dr. Chesselet’s interest in neurodegenerative disorders of the basal ganglia led her to study clinically relevant models of Huntington’s and Parkinson’s diseases. Outside of UCLA, she has a national leadership presence in the Society for Neuroscience, including her leadership of the Committee on the Development of Women’s Careers. As a mentor, she has trained women in her laboratory and actively promoted them in their careers following graduation.

Lily Claiborne, PhD
Senior Lecturer in the Department of Earth and Environmental Sciences
Vanderbilt University

Dr. Claiborne is co-primary investigator on a National Science Foundation Research Experience for Undergraduates project that targets underrepresented populations to provide opportunity, community, and mentorship that lead to STEM career success. In its first year, all of the female students who applied to graduate geoscience programs were admitted with funding. Claiborne also uses feminist pedagogies to create inclusive classrooms to reduce stereotypes.
**Sarah Codd, PhD**  
Professor of Mechanical Engineering  
Montana State University (MSU)

Since she began at MSU, Dr. Codd has been an incredible resource to women in the College of Engineering. She often organizes an informal networking session for female faculty in the college to meet and discuss their research, concerns, and accomplishments. Codd also works closely with young women in the Women in Science and Engineering club, and many of her mentees win internal and external awards annually.

**Anita É. Csoma, PhD**  
Integration Manager  
ConocoPhillips Co.

Dr. Csoma has been a leader in the energy industry for nearly 12 years, having worked as a researcher at Shell and now ConocoPhillips, where she previously served on the Reservoir Quality Prediction team and now works on Unconventional Sweet Spot Research and Development. She has received several awards and recognitions for her research and work, including the Outstanding Paper of the Year Award in the Journal of Sedimentary Research.

**Winny Dong, PhD**  
Professor of Chemical and Materials Engineering  
California State Polytechnic University (Cal Poly), Pomona

Dr. Dong’s 15-year tenure at Cal Poly, Pomona has been punctuated by a dedication to advancing opportunities for women and underrepresented groups in STEM fields. Since 2010, Dong has served as the director of the university’s McNair Scholars Program, which helps prepare low-income, first-generation, and underrepresented students to enter doctoral programs. She also founded the university’s Achieve Scholars Program to provide scholarships for first-generation students doing undergraduate research.

**Kelly Doran, PhD**  
Professor of Biology  
San Diego State University (SDSU)

In addition to teaching, Dr. Doran spends much of her time mentoring and training students of all levels in her research lab, where she studies host-pathogen interactions in the central nervous system, in the female reproductive tract, and in the development of cancer. She also currently serves on the executive board of two National Institutes of Health-sponsored initiatives at SDSU to help increase diversity in biomedical sciences.

**Co-founders of the Center for Sustainable Nanotechnology**

This group of women, all international leaders in their fields, worked together to create the Center for Sustainable Nanotechnology (CSN), funded by the National Science Foundation (NSF). The CSN is a research center that crosses institutional and disciplinary boundaries by providing an inspiring training environment for scientists at the undergraduate, graduate, and postgraduate levels. With the goal of increasing diversity and female representation in STEM fields, these women have created a center that is composed of nearly 50 percent women — a high number in the field of chemistry. At the center, they promote a welcoming climate in which they have regular discussions on implicit bias and gender-based differences, as these factors relate to networking and confidence. In addition, each of these women has contributed greatly to her field; together, they have published nearly 400 papers, regularly give talks around the world both on their scientific work and on issues related to women in STEM fields, and have been recognized for their work with many awards. Recently, the NSF recognized them for their efforts by granting the center five more years of financial support.

(Left to right)

**Rebecca Klaper, PhD**  
Professor in the School of Freshwater Sciences  
University of Wisconsin–Milwaukee

**Catherine Murphy, PhD, FRSC, NAS**  
Markunas Professor of Chemistry  
University of Illinois at Urbana–Champaign

**Christy Haynes, PhD**  
Professor of Chemistry  
University of Minnesota

**Gayla Orr, PhD**  
Senior Research Scientist  
Pacific Northwest National Laboratory
“Science is competitive, aggressive, demanding. It is also imaginative, inspiring, uplifting.”
— Vera Cooper Rubin, astronomer

Top 5: Projected Job Growth in Science

1. Environmental scientists, 25%
2. Hydrologists, 24%
3. Geoscientists, 22%
4. Medical scientists, 20%
5. Biochemists & biophysicists, 16%

According to the U.S. Bureau of Labor Statistics, the number of science-related jobs will increase at a rate faster than the national average between now and 2016.

Deep-Sea Research Technician

Solve some of the mysteries of the sea by collecting deep-sea animals from oceans across the world, extracting and sequencing their DNA, and using statistics to understand the ecological and evolutionary processes.

“It is the tension between creativity and skepticism that has produced the stunning and unexpected findings of science.”
— Carl Sagan

HISTORIC WOMEN

Lisa Meitner 1878-1968

With a PhD in physics, Meitner helped discover and name the radiochemical process of nuclear fission, which led to the development of the atomic bomb. Her collaborator Otto Hahn won the Nobel Prize in 1944, but Meitner was overlooked.

Women make up 47% of the total U.S. workforce but are less represented in some science occupations:

About 28% of environmental scientists and geoscientists are women

39% of chemists and materials scientists are women

Minority women comprise fewer than 1 in 10 employed scientists and engineers.

HISTORIC WOMEN

Mae Jemison 1956-

Mae C. Jemison is the first African American female astronaut. In 1992, she flew into space aboard the Endeavour, becoming the first African American woman in space.

HISTORIC WOMEN

Rosalind Franklin 1920-1958

Franklin was a chemist and X-ray crystallographer, and her X-rays of diffraction images of DNA led to Watson and Crick’s discovery of the DNA double helix. The two men were awarded the Nobel Prize in 1962; Franklin had died of ovarian cancer four years earlier.

Clean Energy: Wind Power

Harness the power of the wind by discovering how to use technology to convert its kinetic energy into electricity to build wind farms and provide the world with a clean source of renewable energy.

“Science is not a boy’s game; it’s not a girl’s game. It’s everyone’s game. It’s about where we are and where we’re going.”
— Nichelle Nichols, former NASA ambassador and actress

Inspiring Women in STEM Awards

Anne Douglass, PhD
Senior Scientist, Aura Project Scientist NASA Goddard Space Flight Center

Dr. Douglass, an atmospheric scientist, currently serves as the project scientist for the Aura satellite — one of the large Earth Observing System missions — and as principal investigator on the Goddard chemistry-climate model. She is known for her support of young female scientists and school-age girls, having mentored and taught STEM skills to Girl Scouts even after her five children were grown.

Delores M. Etter, PhD
Caruth Professor of Engineering Education, Southern Methodist University (SMU)

Dr. Etter’s long career has included teaching at the U.S. Naval Academy, leading large projects at the Pentagon, and now teaching and mentoring students at SMU, where she founded the Caruth Institute for Engineering Education. As its founding director, she has focused on increasing the number and diversity of high school graduates interested in pursuing careers in STEM education with the creation of websites, activities, and summer camps.

Silvia Figueira, PhD
Associate Professor of Computer Engineering, Santa Clara University

Dr. Figueira has not only encouraged her undergraduate research students, but she also sufficiently impressed Jack Kuehler — the late, past president of IBM — to endow a fund to support undergraduate research at the university in the summers, as well as part time during the academic year. She is a strong voice for research and graduate school — a difficult sell to students with so many job opportunities in nearby Silicon Valley.

Krishna Foster, PhD
Professor of Chemistry California State University, Los Angeles

An atmospheric chemist, Dr. Foster is well-known for leading diverse teams of undergraduate and graduate students in research and guiding their intellectual, professional, and personal development. Beyond the classroom and lab, she serves as associate director of Cal State, L.A. Minority Opportunities Research (MORE) programs to prepare underrepresented minority students for PhD studies, many of whom have gone on to receive a PhD and now mentor other young scientists.

Ana Cristina Fulladolsa Palma, PhD
Research Associate University of Wisconsin-Madison

As a PhD candidate in the Department of Plant Pathology, Dr. Fulladolsa Palma, along with two other students, started a bilingual K-12 education group called What’s Eating My Plants? It aims to increase interest — as well as diversity — in the fields of life and plant sciences by letting students see, touch, and experience plants and microbes up close. The program has received the Don and Judy Mathre Education Endowment Award.

Gail Gasparich, PhD
Acting Assistant Provost, Associate Dean of the Fisher College of Science and Mathematics, Professor Towson University

In addition to her other roles at Towson University, Dr. Gasparich is co-director of the Women in Science Center and runs the Women in Science Forum. Through these, she has helped expose women and girls to STEM professionals in various fields. She also works with undergraduate students doing research and has inspired many of them to continue their education beyond the undergraduate level.

Judith Gasson, PhD
Professor of Medicine and Biological Chemistry, Senior Associate Dean for Research, David Geffen School of Medicine at UCLA

Dr. Gasson directs UCLA’s Jonsson Comprehensive Cancer Center. Under her leadership, the center has become a recognized international pioneer in “translating” laboratory discoveries into more effective cancer therapies. As a leader, Gasson has inspired many women in STEM disciplines. Her mentorship has influenced scores of trainees in STEM fields, and her female trainees have developed outstanding careers in medicine, science, and patent law.

Isabel Gauthier, PhD
David K. Wilson Professor of Psychology Vanderbilt University

Dr. Gauthier has made landmark contributions in cognitive neuroscience and has established a remarkably strong record of mentoring students, many of them female. She continues to make important contributions in visual cognition, including our understanding of object recognition. Gauthier also created a model of collaborative research centered on student involvement to expose trainees to a variety of theoretical and empirical approaches.
**Sara Giordano, PhD**

**Assistant Professor of Feminist Science Studies**  
San Diego State University (SDSU)

In the Department of Women's Studies, Dr. Giordano teaches courses on women and science, and she works to increase the number of women in STEM fields through her research and mentorship of first-year students in SDSU's faculty-in-residence program. In this position, she partners science students who are more advanced in their degrees with first-year students who may be undecided about their future.

---

**Victoria Greene, PhD**

**Stevenson Professor of Physics**  
Vanderbilt University

Dr. Greene is the first female faculty member, full professor, and endowed chair in her department at Vanderbilt. She is the founding faculty adviser for the Vanderbilt Women in Science and Engineering group and was founder and chair of the Committee on Climate for Women and Underserved Populations in the physics department. Locally, Greene serves on the leadership group for the Center for STEM Education for Girls.

---

**Laura Guertin, PhD**

**Professor of Earth Science**  
Penn State Brandywine

Most universities wait until students reach their senior year to begin research. However, as the only Earth science faculty member at Penn State Brandywine, Dr. Guertin allows students to begin their own research projects as freshmen and sophomores. This early engagement provides a solid and valuable foundation for further learning and development at the upper level. Of the undergraduates she has mentored, 75 percent have been women.

---

**Julia H. Haggerty, PhD**

**Assistant Professor of Geography**  
Montana State University

As a human geographer working to understand the interactions between natural resource use and the social and economic well-being of rural communities, Dr. Haggerty uses data and policy analysis to triangulate among resource decision-making, environmental change, and outcomes for individuals and communities. This year, Haggerty received a USDA grant to study energy development and was an invited speaker at a White House workshop on climate change.

---

**Eunha Hoh, PhD**

**Associate Professor of Environmental Public Health**  
San Diego State University

As a researcher focused on identifying diverse environmental pollutants, Dr. Hoh has developed a novel, analytical approach for detecting a broad range of organic chemicals in marine animals, human breast milk, and third-hand tobacco smoke. She is currently the principal investigator on two studies — one involving bio-accumulative compounds in blubber from bottlenose dolphins, and the other, an approach for assessing toxicity of tobacco product waste and the risks posed by third-hand smoke exposure.

---

**Kelly Holley-Bockelmann, PhD**

**Associate Professor of Astronomy**  
Vanderbilt University

Using supercomputers to simulate the evolution of galaxies and black holes, Dr. Holley-Bockelmann’s work has garnered international recognition. She also displays a deep commitment to her students above and beyond her official duties. Holley-Bockelmann devotes a significant portion of her time to the Fisk-Vanderbilt Master’s-to-PhD Bridge Program, which helps underrepresented and low-income STEM students successfully transition into PhD programs.

---

**Meredith Hastings, PhD**

**Associate Professor of Earth, Environmental, and Planetary Sciences**  
Brown University

Dr. Hastings co-founded and serves as vice president of the Earth Science Women’s Network (ESWN), an organization dedicated to career development and community-building for women to support a more diverse scientific community. Hastings excels at tailoring her mentoring style to her students’ needs and provides ample opportunities for their development as scientists and professionals.

---

**Rachelle Heller, PhD**

**Associate Provost for Academic Affairs, Professor of Computer Science**  
George Washington University

When Dr. Heller interviewed for her first job in the 1960s with a bachelor’s degree in chemistry, she was told women were hired as secretaries, not scientists. Over her career, Heller’s research has focused on computers in education and the impact of interactive multimedia on learning. Through bridging her interests and increasing diversity, Heller has integrated her efforts to increase representation of women and minorities in STEM.
Tracey Holloway, PhD
Professor of Environmental Studies
University of Wisconsin-Madison

Dr. Holloway is the president and co-founder of Earth Science Women’s Network, an organization dedicated to career development and supporting a more diverse scientific community. As a researcher, she applies quantitative methods to air quality models and observations, addressing policy-relevant problems in energy, transportation, and public health. Holloway is also deputy leader of the NASA Air Quality Applied Sciences Team.

Anne Hornickel
Program Director of NorthStar
STEM Alliance
University of Minnesota

Through leadership in science museum administration and higher education outreach — as well as through Minnesota’s Louis Stokes Alliances for Minority Participation grant — Hornickel has encouraged girls and women to explore and pursue careers in STEM fields. To create a system perspective of STEM programming in Minnesota, she has spearheaded the development of the Minnesota STEM Network, an initiative of SciMathMN, which engages 1,500 STEM advocates statewide across education, industry, and community organizations.

Helen Hu, PhD
Chair, Professor of Computer Science
Westminster College, Salt Lake City

With the help of several grants, Dr. Hu has worked tirelessly to improve STEM education and increase diversity in those fields. She created a computer science course that is now taught at 49 high schools in Utah and has trained colleagues at Westminster to use inclusive pedagogy in STEM classes. Hu has received several awards for her work, including the 2014 Women Tech Council’s Award for Academic Excellence.

Maria V. Kalevitch, PhD
Dean of the School of Engineering, Mathematics, and Science, Professor
Robert Morris University (RMU)

When Dr. Kalevitch began at RMU as an assistant professor in 2002, she was the only female faculty member. By 2004, she had become the founding chair of the science department and developed the Pre-medicine Program at the university. She now serves as the first female dean of the School of Engineering, Mathematics, and Science and on RMU’s Diversity and Inclusion Committee.

Tanja Karp, PhD
Associate Professor of Electrical and Computer Engineering
Texas Tech University

Dr. Karp developed a way to foster connections among a number of STEM outreach programs offered by her department so that students would seamlessly pass from elementary to middle to high school and then on to college. Karp assumed direction of the earliest program — Get Excited About Robotics, or GEAR — and under her leadership, it has grown to more than 700 participants each year.

Bernine Khan, PhD
Assistant Dean of the School of Natural Sciences and Mathematics
University of Texas at Dallas

Dr. Khan is an environmental engineer with more than 10 years of experience, but she is better known for her work advocating for women and minorities in STEM fields, especially those from disadvantaged backgrounds. She has helped create programs and organize events — such as Science Day at the Dallas Arboretum and the university’s SMART Program — to introduce these young people to science, going above and beyond to be a good role model for them.

Anna Krylov, PhD
Professor of Chemistry
University of Southern California

Dr. Krylov, a theoretical chemist, is known for developing a Web-based list of women in theoretical and computational chemistry, biochemistry, material sciences, and molecular/atomic physics. This features 400-plus women who hold academic and research positions worldwide and serves as an invaluable resource for conference organizers and award committees. In addition to ensuring women are represented at academic and professional conferences, she has received the Mellon Mentoring Award for her dedication to mentoring.

Tracey Lanham
Program Chair of the Computer Information Technology Programs
Hodges University

Functioning as the coordinator for the Aspirations in Computing Award for her region, Lanham works closely with the National Center for Women in Information Technology to provide opportunities and encouragement to high school girls who excel in technology and leadership within their community. She also oversees AspireIT camps to teach middle school girls app and game development in the summer.
“It is impossible to work in information technology without also engaging in social engineering.”
— Jaron Lanier

**COOL JOBS**

Social Roboticist

Design robots that are able to interact, communicate, and connect with humans and can conduct a variety of tasks. Develop new approaches for how these social robots can impact our lives in unique and useful ways.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

“It is predicted that there will be 1 million more computing jobs than there are students to fill them by 2020.”

**U.S. millennials ranked dead last out of 19 countries tested in problem solving with technology.**

**Top 5: Fastest-Growing Tech Jobs**

1. DevOps engineer
2. iOS developer
3. Data scientist
4. UX designer
5. UI developer

**Game Programming**

Bring unique video game concepts to life by writing code that will become a playable video game. Set the scene by programming the audio, graphics, special effects, and artificial intelligence to create the ultimate player experience.

**COOL JOBS**

HISTORIC WOMEN

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

**HISTORIC WOMEN**

Ada Lovelace 1815-1852

Lovelace, a writer and mathematician, is best known for writing the first algorithm meant to be carried out by a general-purpose computer. Because of this work, she is considered the first computer programmer.

**HISTORIC WOMEN**

Grace Hopper 1906-1992

Hopper helped program the Harvard Mark I computer in 1944 and invented a compiler to translate computer code into an executable file, which laid the groundwork for the first computer programming language. She also served as rear admiral in the U.S. Navy.

**HISTORIC WOMEN**

Hedy Lamarr 1914-2000

Widely known as a popular film actress, Lamarr also helped invent spread-spectrum and frequency-hopping technology to defend against Axis-power radio jamming during World War II. The system became the basis of today’s Wi-Fi, Bluetooth, and wireless and cordless communication. For her work, Lamarr was inducted into the National Inventors Hall of Fame in 2014.

“Technology made large populations possible; large populations now make technology indispensable.”
— Joseph Wood Krutch

In 2013, help-wanted ads for software developers were up 120% from 2012.

Sources: U.S. Bureau of Labor Statistics; Code.org; Change the Equation, Does Not Compute, 2015; TheLadders
Inspiring Women in STEM Awards

Sarah B. Lee, PhD
Director of Undergraduate Studies, Assistant Clinical Professor
Mississippi State University (MSU)

Dr. Lee has helped increase the number of women studying in the Department of Computer Science and Engineering at MSU. With her help, MSU has engaged in programs and summer camps to inspire girls to take an interest in computing. She also plans on-campus activities for female students, such as guest lectures by accomplished women STEM professionals.

Nina Leonhardt
College Associate Dean for Continuing Education
Suffolk County Community College

Since 1986, Leonhardt’s highly successful Science and Technology Entry Program (STEP) has encouraged underrepresented middle and high school students to pursue STEM education. Last year, 280 students from 15 schools participated. With more than half a million dollars in grants annually, she helps fund scholarships and research stipends for female, economically disadvantaged, and underrepresented STEM students.

Gloria Liu
Coordinator of the Center for Promoting STEM
Oakton Community College

Liu has combined her passion for STEM with a commitment to equity. Through her work with the college’s Futures Unlimited gathering for women in junior high and the Illinois Girls Collaborative Project — among many other initiatives and committees on which she’s served — she works to remove barriers to student success with a focus on recruiting, engaging, and retaining students from underrepresented groups. Liu has also initiated a robotics workshop for girls.

Shirley Malcom, PhD
Head of Education and Human Resources Directorate
American Association for the Advancement of Science

Considered a pioneer in the area of engaging women and minorities in science, Dr. Malcom has chaired many national committees on scientific education and literacy. She has served as co-chair of the Gender Advisory Board of the United Nations’ Commission on Science and Technology for Development and was named co-chair of the National Science Board’s Commission on 21st Century Education in STEM.

Elaine Maldonado
Director of Faculty Development
Fashion Institute of Technology, SUNY

Maldonado works to improve the future for women in STEM, most recently through a grant-funded project aimed at retaining them with innovative curriculum and faculty development. She also created a program focused on preparing faculty to meet the needs of women and deliver the new curriculum. Her other efforts include organizing a luncheon with a panel of successful women in design-related STEM fields who shared valuable insights with students.

Alycia Marshall, PhD
Department Chair, Professor of Mathematics
Anne Arundel Community College

Dr. Marshall oversees the college’s Engineering Scholars Program, which works to increase financial and academic support services for students in engineering programs — targeting underrepresented groups in STEM fields — and improve the retention, employment, and transfer rates of engineering students at the college. Since 2011, the Engineering Scholars Program has awarded full scholarships to 60 engineering students.

Kelsey Martin, PhD, MD
Executive Vice Dean, Associate Vice Chancellor
David Geffen School of Medicine at UCLA

Dr. Martin is the first female executive vice dean and associate vice chancellor at UCLA’s David Geffen School of Medicine. Her research examines synaptic plasticity, and her research group has made fundamental discoveries in understanding the specific mechanisms of this process. From 2005 to 2013 she co-directed the UCLA-Caltech Medical Scientist Training Program and was instrumental in doubling the number of female participants.

Aileen Marty, MD
Professor of Infectious Diseases
Herbert Wertheim College of Medicine at Florida International University

Dr. Marty's career began in the U.S. Navy, where she trained as a flight surgeon specializing in tropical medicine and infectious disease pathology, among other areas, for 25 years. As an expert on chemical, biological, and high-energy weapons, she is a member of the United Nations Monitoring, Verification, and Inspection Commission for Weapons of Mass Destruction. Most recently, she helped treat Ebola patients in West Africa.
Dr. Mataric’s personalized mentoring has helped place 100 percent of her female PhD and postdoctoral students in tenure-track engineering/computing faculty positions. She is a founding leader in the field of socially assistive robotics, which focuses on developing human-centered technologies for populations with special needs. Her group has developed assistive systems for children with autism, stroke survivors, and patients with Alzheimer’s.

Having been one of the only women in her undergraduate electrical engineering program, Dr. McGee now crusades to help female engineering doctoral students overcome barriers that often impede them and to increase the number of women of color in engineering faculty. With the help of a grant, she is creating an innovative mentoring program for potential black engineering faculty and hopes to develop retention strategies to inform the development of faculty women of color.

As founder and chair of RIT’s Women in Science group, Dr. Michel provides professional development opportunities to undergraduate women, faculty, and staff at RIT to help them advance their careers in science. She has also co-founded a summer camp called SMASH for eighth-grade girls from all backgrounds; through this camp she hopes to instill in the girls a passion for math and science.

Some of Miller’s accomplishments include managing projects with AAU member campuses in support of AAU’s Framework for Systemic Change in Undergraduate STEM Teaching and Learning, as well as collaborating on multi-institutional projects to improve undergraduate STEM education. As a woman not trained in the sciences, Miller has had to work hard to earn the respect of senior STEM faculty.

In 1985, Dr. Mitra implemented a program within the University of California, Berkeley’s Society of Women Engineers that enabled female students to shadow an engineer to gain real-life experience. In addition to being a skilled mentor and advocate for women in STEM, Mitra has made pioneering contributions in the field of communications and information theory and serves on a committee for the Institute of Electrical and Electronics Engineers.

Dr. Moallem has worked with hundreds of educators in professional development workshops, published the results of her work, established interdisciplinary collaborations with faculty, and mentored more than 1,000 undergraduate and graduate students. The majority of the educators she works with are women, and she has been a model for them on how to lead as a woman in STEM.

Under Dr. Moll’s leadership, the number of women students and faculty in the College of Engineering — as well as research contracts and grants received by the school — has increased. Through outreach efforts, including partnering with community organizations, Moll opens the door for young women interested in STEM. In 2013, she was recognized by TechSchool.com as one of 10 Female Professors Advancing the Cause.

An accomplished computer scientist, Dr. Moore has helped the department of computer science at JSU flourish and has inspired young women in STEM disciplines. Her hard work helped bring the ADVANCE program to the university, making JSU the first HBCU to lead this National Science Foundation-funded initiative. Through it, she developed programs to support women in STEM at JSU and throughout the Southeast.
Elise Morgan, PhD
Professor of Mechanical Engineering
Boston University

Through teaching, research, and mentoring, Dr. Morgan encourages young people to pursue STEM careers. In the lab, she and her students have made significant contributions to understanding how the fragility of our skeleton increases as we age, along with developing new approaches to studying bone regeneration. She also works to increase the number of women in STEM through a program she co-founded called Summer Pathways.

Clare Muhoro, PhD
Associate Professor in the Department of Chemistry
Towson University

Dr. Muhoro is a researcher, lecturer, author, and mentor. Through her role on the Committee for the Advancement of Women in Science, she mentors and trains young women scientists in the U.S. and developing countries. She has also inspired many girls of color to pursue science careers by conducting summer academies and giving regular talks at middle and high schools.

Sherie L. Morrison, PhD
Distinguished Professor of Microbiology, Immunology, and Molecular Genetics, David Geffen School of Medicine at UCLA

The long-time goal of the laboratory directed by Dr. Morrison has been to understand how the antibody molecule functions, and she has had a major impact on developing antibodies for use in therapy in humans; she also helped pioneer antibody fusion proteins. Morrison’s success is mirrored by her pride in developing trainees to take on major responsibilities in academia and industry.

J. Renee Navarro, MD, PharmD
Vice Chancellor of Diversity and Outreach, Professor of Anesthesiology and Perioperative Care
University of California, San Francisco

Women make up 75 percent of the UCSF community, and Dr. Navarro has made it one of her top priorities to break down gender equity barriers with focused diversity trainings and mentorship opportunities. Spearheaded by her office, the university’s Diversity Pipeline Initiative, founded in 2006, is a conference designed to increase diversity in academia among women of color from the university’s 16 health sciences schools.

Alecia Nero, MD
Assistant Professor in the Departments of Internal Medicine and Pediatrics
University of Texas Southwestern Medical Center

Having witnessed industry discrepancies in the coordination of care and resources for children with sickle cell disease (SCD) compared with adults, Dr. Nero planned her career path to allow her to care for children with SCD across their life spans. She is an advocate for women in STEM and is active with the UT Southwestern Women in Science and Medicine Advisory Committee.

Crystal Morton, PhD
Associate Professor of Mathematics Education, Indiana University–Purdue University Indianapolis

In addition to teaching undergraduate and graduate courses, Dr. Morton serves as a role model for female high school and college students. Her greatest effort has been the organization and implementation of STEM summer enrichment programs aimed at young girls of color. Through hands-on activities, such as measuring ingredients for recipes, she makes math understandable and fun.

Cindy Moss, PhD
Director of Global STEM Education Initiatives, Discovery Education

As a nationally respected thought leader in STEM education and reform with 25 years of experience, Dr. Moss is passionate about supporting women and girls and encouraging them to enter these fields. One way she does so is by facilitating Discovery Education’s STEM Camp, a set of curricula offered at no cost to schools and nonprofit organizations for use in summer and after-school programs. She also partners with organizations to help set the vision and national policies for STEM education.

Jessica Oster, PhD
Assistant Professor of Earth and Environmental Science
Vanderbilt University

Having had female mentors herself, Dr. Oster learned firsthand how important it is for aspiring female scientists to see women succeeding professionally while balancing work and family life. Oster has formally mentored several women in master’s and PhD programs, and informally at Vanderbilt. Oster serves as a sounding board for young women in her department who need advice.
As an industrial engineer, Gilbreth designed products to make home life easier, such as the foot-pedal trash can and an improved electric can opener. She was one of the first working female engineers with a PhD, the first female engineering professor at Purdue University, and the first woman elected to the National Academy of Engineering.

MacGill was the first female aircraft designer, and during World War II, she streamlined mass production of fighter planes as an aeronautical engineer. In addition to being the first Canadian woman to earn a degree in electrical engineering, MacGill was an active supporter of women’s rights.

In 2013, engineering was the most popular college major choice for high school seniors. Engineers enjoy greater job security, with only a 3.8% unemployment rate.

"Scientists discover the world that exists; engineers create the world that never was."
— Theodore Von Karman

"Engineering is a form of art and has filled the world with things of obvious visual beauty, but also with subtle forms."
— Louis Brown

Although women make up nearly half of the U.S. workforce, they are less represented in engineering occupations:
- 17.2% of industrial engineers are women
- 15.6% of chemical engineers are women
- 12.1% of civil engineers are women
- 8.3% of electrical and electronics engineers are women
- 7.2% of mechanical engineers are women

18% of bachelor’s degrees in engineering are earned by women.

of school hours and on weekends to work with girls interested in learning about STEM fields. She uses her science background to inspire girls to pursue STEM fields, connecting them to summer opportunities like camps, internships, and mentorships. Ostos does an excellent job coordinating opportunities that allow girls to work side by side with professionals in various STEM-related disciplines.

Karen R. Pearson, PhD
Professor, Assistant Chairperson of the Department of Science and Mathematics
Fashion Institute of Technology, SUNY

Dr. Pearson applies the most current research on how women learn science to her instruction. Her project- and problem-based teaching and learning approaches include activities such as deconstructing the life cycle of jeans, testing and developing green beauty products, and refurbishing or recycling packaging. For students, these activities underscore the importance of STEM in design fields.

Linda Ott, PhD
Professor of Computer Science
Michigan Technological University

Dr. Ott established and runs the Women in Computer Science summer programs for high school girls at Michigan Tech. She also helped secure a Pacesetters grant for the Michigan Tech computer science department; the Pacesetters program focuses on attracting and retaining women in computing fields. Ott is also the founder of the Michigan Celebration of Women in Computing Conference.

Erin C. Pettit, PhD
Assistant Professor of Geophysics and Glaciology
University of Alaska Fairbanks

Beyond her duties as a professor, Dr. Pettit works to provide life-changing opportunities for young women. As founder and director of Girls on Ice, she gives high school girls the chance to immerse themselves in science and develop their wilderness skills. Every summer, participants gain confidence as they trek across some of the world’s remaining glaciers. Pettit also works to train other professors to be effective mentors.

Kelli Palmer, PhD
Assistant Professor in the Department of Biological Sciences
University of Texas (UT) at Dallas

Since joining UT Dallas, Dr. Palmer has rapidly become a star in the field of bacterial drug resistance. Moreover, she has been at the forefront of recruiting to the university women and minorities underrepresented in the sciences, as well as training them. She leads by example and hosts high school through postdoctoral students in her laboratory, some of whom have received national and international awards.

Amelia Phillips, PhD
Chair of the Pure and Applied Science Division
Highline College

Dr. Phillips is an inspiration to women and underrepresented students on one of the most diverse campuses in Washington state, with 70 percent students of color. As an expert in computer forensics, she often speaks and serves as a panelist at conferences and campus and community events. She also mentors female students and has taken many to the Women in Cybersecurity Conference through Highline’s Women in Cybersecurity Club.

Madeline Palmer
Co-founder
STEMpowered, Inc.

Palmer is in the inaugural class of medical students at the Central Michigan University College of Medicine and is co-founder of the nonprofit STEMpowered, Inc. Along with co-founder Erika Brockberg, Palmer raised enough money so that every Detroit public school girl who participated in this weeklong STEM camp attended for free. STEMpowered camp activities included field trips, demonstrations, crafts, and games, and each student was paired with a mentor.

Logeswari Ponnusamy, DVM, MVSc
Graduate Research Assistant
Texas Tech University, The Institute of Environmental and Human Health

As a doctoral student in the Department of Environmental Toxicology, Dr. Ponnusamy balances cancer research with her commitment to promoting equity and diversity. She devotes much of her time and effort to mentoring underprivileged high school and undergraduate women, while also researching gene-environmental interaction in chemotherapeutic resistance in the development of breast cancer. She also serves on several outreach and research committees.
Angelia Reid-Griffin, PhD

**Associate Professor of Science Education, University of North Carolina at Wilmington**

Dr. Reid-Griffin works to inspire young people to pursue careers in STEM. In 2005, she established the Junior Seahawk Academy summer program to provide opportunities for low-income and underrepresented minority middle school students to develop an interest in STEM, health, and education careers through fun, hands-on activities. Through her work, she challenges educators to teach in interdisciplinary ways and students to ask critical questions and construct new possibilities.

Anne M. Robertson, PhD

**Professor of Engineering University of Pittsburgh**

Robertson leads and inspires the next generation, with a special focus on women and underrepresented minorities. In addition to teaching, she serves as the director of the Center for Faculty Excellence in the Swanson School of Engineering (SSoE) and is known for a deep commitment to diversity in her field, having won the SSoE’s Faculty Award for Diversity.

Deborah M. Settoon, PE

**Project Manager of Offshores Facilities Shell**

When Settoon began her career as an engineer at a drilling company in 1979, she was one of a handful of women employed by the organization. To entice more women to enter the profession, she helped develop career guidance programs for the Society of Women Engineers and has conducted workshops and programs to support young women in engineering. She has worked for three decades as an engineer for both Texaco and Shell.

Tolou Shokuhfar, PhD

**Associate Professor of Bioengineering University of Illinois at Chicago**

Dr. Shokuhfar is known for taking female engineering students under her wing and providing a role model for these future engineers. In her previous position at Michigan Technological University, she organized “girls coffee out” gatherings, during which she would listen to students and offer career advice. At Michigan Tech, she also served as faculty adviser for the Society of Women Engineers and the Women’s Committee of American Society of Mechanical Engineers.

Anahita Sidhwa

**Professor of Physics and Astronomy Brookhaven College**

As well as being lead faculty in her department, Sidhwa is committed to STEM outreach and encouraging women to participate. The local chapter of the American Association of University Women hosts “Reach for the Stars at Brookhaven” — a STEM career conference for middle school girls that Sidhwa has helped organize for 16 years. Recent data show that many of these girls return to Brookhaven as STEM students.

Besma Smida, PhD

**Assistant Professor of Electrical and Computer Engineering Purdue University Calumet**

As the current faculty adviser for the Society of Women Engineers at Purdue Calumet, Dr. Smida actively encourages women interested in STEM careers. This spring, Smida received the National Science Foundation’s prestigious CAREER Award grant to enhance spectrum efficiency for cellphones and other wireless communication devices. The CAREER program offers the foundation’s most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars.

Pamela Spencer, PhD, DABT

**Scientific Director of Toxicology and Environmental Research & Consulting The Dow Chemical Company**

As the diversity liaison from Dow Chemical for Central Michigan University (CMU), Dr. Spencer is a critical asset to the university as it develops a program focused on engaging more women in engineering and computer science. She has been instrumental in providing an industry perspective on CMU’s plans and helping connect students with female mentors. Spencer has also helped develop educational STEM programs for K-12 girls.

Louise Stark, PhD

**Professor Emeritus of Engineering and Computer Science University of the Pacific**

In 1992, Dr. Stark became the first female faculty member in the School of Engineering and Computer Science at University of the Pacific, and she has been so successful at recruiting high-quality female faculty to the department that, currently, 50 percent of the faculty is female. Stark has served countless hours as faculty adviser for Pacific’s chapter of the Society of Women Engineers, and she helped establish a community conference introducing girls to STEM disciplines.
Inspiring Women in STEM Awards

Jennifer Switkes, PhD
Professor of Mathematics and Statistics, California State Polytechnic University, Pomona

Known for her work as a mentor and adviser, Dr. Switkes goes out of her way to help her students by assisting them with research projects, co-authoring papers with them, providing academic and moral support, and ensuring they graduate on time. She makes a genuine investment in students’ futures by helping them achieve both academic and professional success.

Aimée Tomlinson, PhD
Associate Professor of Chemistry University of North Georgia

Through her collaboration with the Jeffries-EL Group at Iowa State University, Dr. Tomlinson is designing materials for use in organic electronics using a benzobisoxazole nucleus, which led to a National Science Foundation grant. She has also received an Air Force Office of Scientific Research grant for her and a colleague’s work involving electrochromic materials. In addition to teaching, she is a reviewer for several scientific journals and has served on numerous scientific committees.

Lori Troxel, PhD, PE, FASCE
Associate Professor of Civil and Environmental Engineering Vanderbilt University

Dr. Troxel inspires students to pursue careers in STEM fields by helping them recognize and appreciate engineers’ contributions to society. In addition to teaching, she serves as faculty adviser for the Vanderbilt student chapter of the American Society of Civil Engineers and encourages young women to pursue leadership roles in the organization. She also inspires engineering students by leading them on trips to study infrastructure abroad.

Tommie Yvette Turner, PhD
Director of the Institute for Science and Mathematics Harris-Stowe State University

Over four years, Dr. Turner has mentored more than 100 incoming female freshmen in the annual summer Academy for Science and Mathematics program at Harris-Stowe. She has exposed these students to STEM professionals and careers. Turner also oversees the school’s science and mathematics tutorial program, assists with faculty mentoring, develops strategies for retaining and graduating students in STEM, and more.

Janet Walkow, PhD
Executive Director, Chief Technology Officer at Drug Dynamics Institute The University of Texas at Austin

As a member of the American Association of Pharmaceutical Scientists, Dr. Walkow developed the Women in Science platform for young women to learn about STEM careers and co-founded the Leading Women Project to teach women how to lead and manage others. She also serves on the Health Promotion Council of Pennsylvania and the Harvard Kennedy School Women’s Leadership Board.

Mei Wei, PhD
Associate Dean of the School of Engineering University of Connecticut

Dr. Wei established a world-renowned research program focusing on biomaterials and tissue engineering and has collaborated with researchers on groundbreaking bone regeneration and scaffolding studies. In 2007, she was recognized for serving as an exceptional role model to future generations of female leaders in STEM with the Connecticut Technology Council’s Women of Innovation award. This year, she was appointed associate editor of the Journal of Biomedical Materials Research Part A.

Anita C. White, PhD
Teacher Illinois Mathematics and Science Academy

Dr. White shows her dedication to her students by building rapport with them and their families and ensuring they are supported both academically and emotionally. Through special programs, she supports students from underrepresented populations by not only preparing them for rigorous STEM curricula, but also by focusing on their retention.

Holly Wichman, PhD
University Distinguished Professor in the Department of Biological Sciences University of Idaho

As a first-generation college student and young mother of two studying to get her PhD, Dr. Wichman encountered many challenges along her path to becoming a successful academic research scientist and educator. As such, she continuously mentors young women, both students and faculty, to help them succeed in their own careers. For her dedication to helping first-generation and multicultural students, she received the University of Idaho’s Distinguished Faculty Award.
Quing Zhu, PhD
Professor in the Electrical and Computer Engineering Department University of Connecticut

Dr. Zhu’s pioneering research in breast cancer diagnosis and treatment monitoring has been lauded by the imaging and radiology community as an important advance in society’s ability to distinguish benign from malignant lesions in the breast without recourse to biopsy. She has also made pioneering contributions to non-invasive ovarian cancer detection and diagnosis. Her research and clinical studies have been supported by nearly $10 million.

Jennifer L. Zirnheld, PhD
Associate Professor in the Department of Electrical Engineering University at Buffalo, SUNY

Dr. Zirnheld plays a critical role in educating and developing our nation’s future scholars, particularly young women and minorities. She actively mentors both undergraduate and graduate students through several national programs, hosting them in her lab for research experiences. She also serves on the steering committee for the Institute for Strategic Enhancement of Educational Diversity (iSEED), as she works to build a culturally diverse biosciences community.

Mathematics

HISTORIC WOMEN
Emmy Noether
1882-1935

Despite being barred from enrolling in college, going unpaid for her teaching, and being ousted from Nazi Germany for being Jewish, Noether’s work in abstract algebra and theoretical physics led to Albert Einstein calling her “the most significant creative mathematical genius thus far produced since the higher education of women began.”

Top 5: Highest-Paying Jobs for Math Majors (bachelor’s degree)
1. Data scientist, $109,700
2. Actuary, $97,900
3. Senior actuarial analyst, $86,600
4. Statistical analyst, $74,700
5. Actuarial analyst, $73,800

COOL JOBS
Cryptographer
Delve into the world of cyber security by considering factors that make software vulnerable to hacking and developing solutions, such as inscription and encryption, to protect confidential information and communications.

COOL JOBS
Roller Coaster Designer
Have fun designing and constructing these thrill rides with a knowledge of mathematical properties and physics. Keeping safety and structure in mind, make rides exciting with loops, embankments, and natural scenery.

Since the recession began in 2007, computer and math jobs have grown by 21%, which is faster than any other occupational category.

HISTORIC WOMEN
Maryam Mirzakhani
1977-

In 2014, Mirzakhani became the first woman to win the Fields Medal, considered the Nobel Prize of mathematics. A native of Tehran, Iran, Mirzakhani is currently a professor of mathematics at Stanford University.

“Without mathematics, there’s nothing you can do. Everything around you is mathematics. Everything around you is numbers.”
— Shakuntala Devi, Indian writer and mental calculator, known as the “human computer”

Sources: PayScale.com; Business Higher Education Forum, Meeting the STEM Workforce Demand: Accelerating Math Learning Among Students Interested in STEM, 2011; Brookings Institution, Still Searching: Job Vacancies and STEM Skills, 2014

“Pure mathematics is, in its way, the poetry of logical ideas.”
— Albert Einstein
The West Virginia University-Charleston Division Department of Internal Medicine is seeking an Associate Residency Program Director at the Charleston Area Medical Center/West Virginia University-Charleston Division Program.

**Job requirements are:**
- MD, DO degree or foreign equivalent degree from an accredited program
- Board Certified by the American Board of Internal Medicine, or specialty qualifications that are acceptable by the ACGME
- Experience as an active faculty member in an ACGME-accredited internal medicine residency program
- The Associate Program Director will be part of a leadership team in a fully accredited program in a large teaching hospital and regional medical school campus. Ability to combine administrative, education and clinical teaching responsibilities
- Willingness to participate in appropriate academic, clinical research or other scholarly activity as may be required of clinical faculty
- Familiarity with ACGME program requirements and policy
- CAMC sponsors 17 medical and pharmacy residencies and West Virginia University-Charleston Division serves as a regional campus for medical, nursing and pharmacy students

**Benefits include:**
- Excellent benefits package with generous PTO
- Salary commensurate with qualifications and experience
- Vibrant community
- Superb family environment
- Unsurpassed recreational activities
- Outstanding school systems

The search will remain open until a suitable candidate is identified.

To apply, please send CV and letter of interest to Carol Wamsley at carol.wamsley@camc.org.
California State University, Los Angeles
College of Business and Economics

The College of Business and Economics at California State University, Los Angeles is seeking qualified candidates to fill the following faculty positions:

Starting Date: August, 2016 (Fall Semester 2016)

ACCOUNTING
• Two Tenure-track Faculty positions
• Areas in Financial, Cost/Managerial, Audit, Tax, Forensic, Governmental, or Accounting Information Systems
• Department of Accounting

FINANCE
• Tenure-Track Assistant or Associate Professor position
• Areas in Finance – especially investments, capital budgeting and related topics
• Department of Finance and Law

MANAGEMENT
• Two Tenure-Track Faculty positions
• One in Healthcare Management or related field; second in Operations and Supply Chain Management or closely related field
• Department of Management

MARKETING
• Two Tenure-Track Assistant Professor positions
• One in the area of Social Media; second in Business Analytics or closely related field
• Department of Marketing

QUALIFICATIONS
Possess a doctorate from an accredited university and be academically qualified under AACSB standards. Terminal degree must be awarded by date of appointment.

For full job description visit: http://web.calstatela.edu/academic/position/csla_be.php; application link: http://web.calstatela.edu/univ/hrm/docs/forms/Empl_applic_academic.pdf

California State University, Los Angeles is an Equal Opportunity/TITLE IX EMPLOYER

Tenure-Track Position in Mathematics
University of Pennsylvania

The Department of Mathematics invites applications for one tenure-track Assistant Professor position. We are especially looking for mathematicians whose work relates to geometry. Responsibilities include teaching undergraduate and graduate courses in Mathematics and conducting research in the field. Ph.D. in Mathematics is required. Applications should be submitted online through www.mathjobs.org and include the following items: cover letter, curriculum vitae, research statement, teaching statement, a publication list, and at least 3 reference letters from mathematicians familiar with your work (one of these should comment on your teaching ability).

Review of applications will begin November 1, 2015 and will continue until the position is filled. It is anticipated that the position will start July 1, 2016.

The Department of Mathematics is strongly committed to Penn’s Action Plan for Faculty Diversity and Excellence and to establishing a more diverse faculty (for more information see: http://www.upenn.edu/almanac/volumes/v58/n02/diversityplan.html). The University of Pennsylvania is an EOE. Minorities/Women/Individuals with disabilities/Protected Veterans are encouraged to apply.

Assistant Professor of Japanese Studies

The Massachusetts Institute of Technology’s Global Studies and Languages Section invites applications for a tenure-track position in Japanese Studies at the level of Assistant Professor, to begin in Fall 2016 (employment begins July 1, 2016). Candidates must hold a completed Ph.D. by the start of employment. Preference will be given to candidates with two years of academic teaching experience at the college or university level, and clear evidence of scholarly development. Teaching duties include mid-tier and upper-level undergraduate courses in Japanese Studies. Native, or near-native, fluency in Japanese and English is required. Applicants should have a specialization in Japanese Studies with direct relevance to research areas such as media and the arts; urban, youth and/or popular cultures; gender or ethnic studies; or Japanese history, literature, anthropology, or cultural studies. Applicants must have significant scholarly work that is published or currently in press. Digital humanities projects will also be considered. MIT expects a highly productive and innovative research program as part of the requirements for tenure. MIT is an Equal Opportunity/Affirmative Action employer and strongly encourages applications from women, minorities, veterans and individuals with disabilities. Please submit a letter of application, CV, three letters of recommendation (including one that specifically addresses your teaching profile), one writing sample of published or publication-ready scholarship (no longer than 30 pages) in English, and two syllabi of undergraduate courses that you would be interested in teaching. Submission of one additional writing sample in Japanese is optional (and should be no longer than 30 pages). Priority will be given to applications received no later than Wednesday, October 7, 2015. Please submit all application materials to: https://academicjobsonline.org/ajo/jobs/5737

UCLA PROFESSOR OF PERFORMANCE PRACTICE

The UCLA School of the Arts and Architecture and the UCLA Herb Alpert School of Music are pleased to invite applications for a tenured or tenure track professorial position as Professor of Performance Practice in the Department of Music. Further information and an online application may be found at:

https://recruit.apo.ucla.edu/apply/JPF00848

UCLA School of the Arts and Architecture
Think of the Possibilities

The College of Arts & Sciences (http://artsandsciences.sc.edu/) at the University of South Carolina is seeking candidates for faculty positions in the:

- **Department of Biological Sciences**
  http://www.biol.sc.edu/

- **Department of English Language and Literature**
  http://artsandsciences.sc.edu/engl/

- **Department of History**
  http://artsandsciences.sc.edu/hist/

- **Linguistics Program**
  http://artsandsciences.sc.edu/ling/home

- **Department of Political Science**
  http://artsandsciences.sc.edu/poli/

- **Department of Psychology**
  http://www.psych.sc.edu/index.html

- **Department of Statistics**
  http://www.stat.sc.edu/

- **School of Visual Art and Design**
  http://artsandsciences.sc.edu/art/about/

**Qualifications:** Terminal degree in relevant field, scholarly publication record, teaching experience. See departmental websites for specific position descriptions, qualifications and contact information.

The College of Arts & Sciences is the largest college in South Carolina, and the largest unit of the University of South Carolina. With 22 core academic disciplines and 50 interdisciplinary programs, centers, institutes, and schools, it is the academic heart of the University.

The University of South Carolina’s main campus is located in the state capital, close to mountains and coast. The Carnegie Foundation for the Advancement of Teaching has designated the University as one of only 40 public institutions with “very high research activity”. The Carnegie Foundation also lists USC as having strong community engagement. The University has over 31,000 students on the main campus, more than 300 degree programs, and a nationally-ranked library system that includes one of the nation’s largest public film archives. Columbia, the capital of South Carolina, is the center of an increasingly sophisticated greater metropolitan area with a population of over 800,000.

The University of South Carolina is an affirmative action, equal opportunity employer. Minorities and women are encouraged to apply. The University of South Carolina does not discriminate in educational or employment opportunities or decisions for qualified persons on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, or veteran status.
West Virginia University
ROBERT C. BYRD HEALTH SCIENCES CENTER
CHARLESTON DIVISION

Trauma Surgeon
Full-Time Academic Opportunity

The Department of Surgery at the Robert C. Byrd Health Sciences Center of West Virginia University, Charleston Division, is recruiting a trauma surgeon. Must be BC/BE in general surgery with BC/BE in trauma/surgical critical care preferred, with ability to obtain an active and unencumbered West Virginia medical license, DEA and staff privileges at Charleston Area Medical Center.

We are seeking surgeons with superior clinical, technical and interpersonal skills to join our dynamic trauma team in a busy Level 1 Trauma Center with a volume of more than 3,200 cases annually. The successful candidate will also have the opportunity to work with and assist in the education of residents and medical students, so their contribution to teaching is expected and needed. Active involvement in research and scholarly activity with documented publication/presentation is important. The initial appointment to West Virginia University/Charleston division will be based on the candidate's background and credentials.

Our compensation and benefits package is extremely competitive and commensurate with qualifications and experience. The search will remain open until suitable candidate is identified. Please submit letter of interest and curriculum vitae via email to:

Carol Wamsley
Physician Recruitment
Charleston Area Medical Center
Email: carol.wamsley@camc.org
Toll-free: 1-866-551-8927

West Virginia University is an EEO/Affirmative Action Employer - Minority/Female/Disability/Veteran

University of South Carolina School of Law

The University of South Carolina School of Law invites applications for a tenured or tenure-track Clinical Director position to begin fall semester 2016. Candidates should have a juris doctorate or equivalent degree and a minimum experience of five years in clinical legal education. Additionally, a successful applicant should have a record of excellence in academia or in practice, the potential to be an outstanding teacher, and demonstrable scholarly promise. Interested persons should send a resume, references, and subject area preferences to Prof. Eboni Nelson, Chair, Faculty Selection Committee, c/o Kim Fanning, University of South Carolina School of Law, 701 S. Main St., Columbia, SC 29208 or, by email, to HIRE2016@LAW.SC.EDU (electronic submissions preferred).

The University of South Carolina is committed to a diverse faculty, staff, and student body. We encourage applications from women, minorities, persons with disabilities, and others whose background, experience, and viewpoints contribute to the diversity of our institution.

The University of South Carolina is an Equal Opportunity Employer and does not discriminate on the base of race, color, religion, sex, national origin, age, disability, genetics, sexual orientation, gender, or veteran status.

University of South Carolina School of Law

The University of South Carolina School of Law invites applications for tenured, tenure-track, or visiting faculty positions to begin fall semester 2016. Candidates should have a juris doctorate or equivalent degree. Additionally, a successful applicant should have a record of excellence in academia or in practice, the potential to be an outstanding teacher, and demonstrable scholarly promise. Although the School of Law is especially interested in candidates who are qualified to teach in the areas of taxation, clinical legal education, environmental law and small business, we are equally interested in candidates who can contribute to the diversity of our law school community whose teaching interests may fall outside of these areas. Interested persons should send a resume, references, and subject area preferences to Prof. Eboni Nelson, Chair, Faculty Selection Committee, c/o Kim Fanning, University of South Carolina School of Law, 701 S. Main St., Columbia, SC 29208 or, by email, to HIRE2016@LAW.SC.EDU (electronic submissions preferred).

The University of South Carolina is committed to a diverse faculty, staff, and student body. We encourage applications from women, minorities, persons with disabilities, and others whose background, experience, and viewpoints contribute to the diversity of our institution.

The University of South Carolina is an Equal Opportunity Employer and does not discriminate on the base of race, color, religion, sex, national origin, age, disability, genetics, sexual orientation, gender, or veteran status.
General Surgeon

The Department of Surgery, Division of General Surgery at the University of Utah is actively recruiting a board certified surgeon with an extensive background in outpatient surgery to join our community-based practice of three other general surgeons. The applicant would be responsible for establishing a practice at our new Farmington outpatient facility. Individuals would be recruited as an Assistant Professor on the clinical track. Applicants would be expected to participate actively in medical student and resident teaching. Usual qualifications for clinical track promotion and retention are expected.

Applicants must apply at: http://utah.peopleadmin.com/postings/44068

Please submit the following:
1. Current Curriculum Vitae
2. Cover letter
3. Please answer all required posting questions.
4. If you answer “Yes” to any of the posting questions, please include a written detailed explanation with your cover letter.

For additional information, contact:
Mark Savarise, MD
Assistant Professor
Division of General Surgery
University of Utah SOM
50 North Medical Drive, 3B-110
SLC, UT 84132
E-mail: mark.savarise@hsc.utah.edu

The University of Utah Health Sciences Center is a patient focused center distinguished by collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

The University of Utah is an Affirmative Action/Equal Opportunity employer and does not discriminate based upon race, national origin, color, religion, sex, age, sexual orientation, gender identity/expression, status as a person with a disability, genetic information, or Protected Veteran status. Individuals from historically underrepresented groups, such as minorities, women, qualified persons with disabilities and protected veterans are encouraged to apply. Veterans’ preference is extended to qualified veterans. To inquire further about the University’s nondiscrimination and affirmative action policies or to request a reasonable accommodation for a disability in the application process, please contact the following individual who has been designated as the University’s Title IX/ADA/Section 504 Coordinator: Director, Office of Equal Opportunity and Affirmative Action, 201 S. Presidents Circle, Rm. 135, (801) 581-8365.

Academic Acute Care Surgeon

The Department of Surgery, Division of General Surgery at the University of Utah seeks a full-time academic surgeon to specialize in acute care surgery (emergency general surgery, trauma, surgical critical care). Successful applicants should be qualified at the level of Assistant or Associate Professor, possess excellent clinical skills, and strong interests in teaching and research. Board certification or eligibility in SCC and general surgery is required. The ideal applicant should possess strong interest and ability in clinical, multi-institutional or outcomes research which will leverage the existing opportunities at the University.

The University of Utah Hospital is an ACS-verified Level I Trauma Center serving a five-state referral area, with approximately 2,500 admissions yearly. The University of Utah also maintains ACGME-accredited training programs in general surgery and all surgical subspecialties.

Applicants must apply at: http://utah.peopleadmin.com/postings/43556

Please submit the following:
1. Curriculum Vitae
2. Cover letter.
3. Please answer all required questions.
4. If you respond “Yes” to any of the posting questions, please include a written detailed explanation with your cover letter.

For additional information, contact:
Ram Nirula, MD
Associate Professor
Trauma Medical Director
University of Utah SOM
Phone: (801) 587-9367
Fax (801) 585-7392
E-mail: r.nirula@hsc.utah.edu

The University of Utah Health Sciences Center is a patient focused center distinguished by collaboration, excellence, leadership, and Respect. The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

The University of Utah is an Equal Opportunity/Affirmative Action employer and educator and its policies prohibit discrimination on the basis of race, national origin, color, sex, sexual orientation, gender identity/expression, religion, age, status as a person with a disability, or veteran’s status. Minorities, women, veterans, and those with disabilities are strongly encouraged to apply. Veterans’ preference is extended to qualified veterans. To inquire further about the University’s nondiscrimination and affirmative action policies or to request a reasonable accommodation for a disability in the application process, please contact the following individual who has been designated as the University’s Title IX/ADA/Section 504 Coordinator: Director, Office of Equal Opportunity and Affirmative Action, 201 South Presidents Circle, Rm. 135, Salt Lake City, UT 84112, (801)581-8365, email: oeo@utah.edu.
Burn/Trauma/Critical/Acute Care Surgeon

The Department of Surgery, Division of General Surgery, at the University of Utah desires to recruit a full-time academic surgeon to specialize in burn, trauma, acute care and critical care surgery. Successful applicants should be qualified at the level of Assistant or Associate Professor, and possess excellent clinical skills, and strong interests in teaching and research. Board certification or eligibility in general surgery, SCC, and burn fellowship training is required. The opportunity exists to focus on a stable, regional burn center, and potential for participation in acute care surgery, trauma, SICUs and SCC at a fully-accredited Burn Center and Level I Trauma Center.

The University of Utah Hospital is an ABA/ACS verified Burn Center that currently admits 400-450 patients yearly with 8000 clinic visits, and provides care for the entire Intermountain West. In addition, the hospital is an ACS-verified Level I Trauma Center, with approximately 2,500 admissions yearly. The University of Utah also maintains ACGME-accredited training programs in general surgery and many surgical sub-specialties.

Interested parties need apply online:
http://utah.peopleadmin.com/postings/25588

For additional information, contact
Stephen Morris, MD
Professor
Division of General Surgery
Department of Surgery
University of Utah SOM
stephen.morris@utah.edu

The University of Utah Health Sciences Center is a patient focused center distinguished by collaboration, excellence, leadership, and respect. The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

The University of Utah is an Equal Opportunity/Affirmative Action employer and its policies prohibit discrimination on the basis of race, national origin, color, sex, sexual orientation, gender identity/expression, religion, age, status as a person with a disability, or veteran’s status. Minorities, women, veterans, and those with disabilities are strongly encouraged to apply. Veterans’ preference is extended to qualified veterans. To inquire further about the University’s nondiscrimination and affirmative action policies or to request a reasonable accommodation for a disability in the application process, please contact the following individual who has been designated as the University’s Title IX/ADA/Section 504 Coordinator: Director, Office of Equal Opportunity and Affirmative Action, 201 South Presidents Circle, Rm. 135, Salt Lake City, UT 84112, (801)581-8365, email: oeo@utah.edu.

---

Faculty Position in Teaching, Learning, Technology and Equity

The Stanford University Graduate School of Education plans a tenure track, assistant or associate professor appointment. We seek candidates whose research embodies innovative approaches that use, design, or study advances in education technologies to create equitable and productive learning opportunities, particularly in low-income communities. We invite applicants who focus on preK-12 learners. We encourage scholars from a variety of academic disciplines who engage in innovative research on equity and technology. We also invite applications from candidates who conduct research employing diverse methodological tools to investigate how technology supports teaching and learning, in and out of school. The search is unrestricted by the candidate’s academic discipline.

The successful candidate will contribute to teaching and advising doctoral and masters students in the GSE.

Applicants are required to provide a cover letter describing their research agenda and teaching experience, curriculum vitae, and a list of three references with complete addresses and phone numbers. The committee will request letters of recommendation and samples of publications from a small group of finalists.

All application materials must be submitted online. Please submit your application on Academic Jobs Online:
https://academicjobsonline.org/ajo/jobs/5671

Deadline to submit application is September 30th, 2015.

Questions pertaining to this position may be directed to Tanya Chamberlain, Faculty Affairs Officer, tanyas@stanford.edu.

Stanford University is an equal opportunity employer and is committed to increasing the diversity of its faculty. It welcomes nominations of, and applications from, women, members of minority groups, protected veterans and individuals with disabilities, as well as others who would bring additional dimensions to the university’s research.
Lecturer Position in Management Communication
School of Hotel Administration
Cornell University, Ithaca, NY 14853

Cornell is a community of scholars, known for intellectual rigor and engaged in deep and broad research, teaching tomorrow’s thought leaders to think otherwise, care for others, and create and disseminate knowledge with a public purpose.

Responsibilities: The primary responsibility is teaching “Management Communication I,” a first-year, core course that emphasizes written communication in professional contexts and includes an introduction to presentational speaking in business. Opportunities may be available in the future to teach “Management Communication II,” which focuses on persuasion, or other courses. Lecturers teach six classes each academic year and hold regular, individual conferences to discuss students’ papers and presentations. Being accessible to students is critical. Lecturers teach multi-section courses and collaborate extensively on curriculum development, student assignments, School projects, and, at times, research projects.

In addition to teaching responsibilities, lecturers have school service responsibilities and are expected to pursue professional development activities, such as presenting at business-communication discipline conferences and interacting with hospitality-industry managers. The School of Hotel Administration supports such activities with professional development funds.

Major Qualifications:
• Discipline-related Master’s degree or Ph.D., preferably from a professional communication or rhetoric program.
• Experience teaching in a four-year, accredited college or university, preferably teaching multi-section courses.
• Experience and skill in teaching writing in professional contexts and willingness to teach both written and oral communication.
• Demonstrated experience and interest in collaborating with colleagues.
• Direct engagement with the business communication discipline—through, for example, presenting at business, technical, or professional communication conferences—is an advantage, as is business knowledge and experience.

Conditions of Appointment: The position’s teaching responsibilities begin in the Spring 2016 or possibly the Fall 2016 semester, and appointment is for three years, renewable. A new hire will be considered for promotion from lecturer to senior lecturer after appropriate quality and length of service. Salary is commensurate with qualifications. Support is provided, including administrative assistance, office space, computers, and other resources.

Institution: The School of Hotel Administration (http://www.hotschool.cornell.edu/), one of Cornell’s ten colleges, has approximately 900 undergraduates and 60 graduate students. The School has over 55 resident faculty members (including five in communication). The School is located at the center of campus in Statler Hall and has an adjacent 150-room hotel and conference center that serves as a learning laboratory for students.

Application: Review of applications will begin immediately and continue until the position is filled. Please include a detailed cover letter, your curriculum vitae, an original course assignment, one writing sample, and the names and contact information for two references and submit using Interfolio at the following link: http://apply.interfolio.com/29364

Cornell University is an innovative Ivy League university and a great place to work. Our inclusive community of scholars, students and staff impart an uncommon sense of larger purpose and contribute creative ideas to further the university’s mission of teaching, discovery and engagement. Located in Ithaca, NY, Cornell’s far-flung global presence includes the medical college’s campuses on the Upper East Side of Manhattan and in Doha, Qatar, as well as the new CornellNYC Tech campus to be built on Roosevelt Island in the heart of New York City.

Diversity and Inclusion are a part of Cornell University’s heritage. We’re an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.
Academic Surgical Intensivist

The Department of Surgery, Division of General Surgery, at the University of Utah SOM, seeks an academic surgical intensivist. Successful applicants should be qualified at the level of Assistant or Associate Professor, possess excellent clinical skills, and strong interests in teaching and research. Board certification or eligibility in critical care is required. Primary specialty could include emergency medicine, anesthesiology or surgery. The successful candidate would divide his or her clinical time between critical care and his or her primary specialty. Experience and interest in cardiovascular critical care would be necessary. The applicant should possess strong interest and ability in clinical, multi-institutional or outcomes research, which will leverage the existing opportunities at the University.

Interested applicants must apply online:
http://utah.peopleadmin.com/postings/43412

Please submit the following:
1 CV
2 Cover letter
3 Please answer all required posting questions.
4 If you answer "Yes" to any of the posting questions, please submit a written detailed explanation with your cover letter.

For additional information, contact:
Richard Barton, MD
Professor
Director, SICU
University of Utah SOM
30 North Medical Drive, 3B-110
SLC, UT 84132
richard.barton@hsc.utah.edu

The University of Utah Health Sciences Center is a patient focused center distinguished by collaboration, excellence, leadership, and Respect. The University of Utah HSC values candidates who are committed to fostering and furthering the culture of compassion, collaboration, innovation, accountability, diversity, integrity, quality, and trust that is integral to the mission of the University of Utah Health Sciences Center.

The University of Utah is an Equal Opportunity/Affirmative Action employer and educator and its policies prohibit discrimination on the basis of race, national origin, color, sex, sexual orientation, gender identity/expression, religion, age, status as a person with a disability, or veteran’s status. Minorities, women, veterans, and those with disabilities are strongly encouraged to apply. Veterans’ preference is extended to qualified veterans. To inquire further about the University’s nondiscrimination and affirmative action policies or to request a reasonable accommodation for a disability in the application process, please contact the following individual who has been designated as the University’s Title IX/ADA/Section 504 Coordinator: Director, Office of Equal Opportunity and Affirmative Action, 201 South Presidents Circle, Rm. 135, Salt Lake City, UT 84112, (801)581-8365, email: oeo@utah.edu.

Our October Issue: Business Schools and Fall Career Guide

Our October issue will focus on efforts to increase diversity at business schools and in the workplace, and to create more inclusive business environments. Also, look for our special Fall Career Guide, featuring career advice, articles about employment best practices, employment opportunities, and more.

The advertising deadline for this issue is September 8. To reserve space, call (800) 573-0655 or email ads@insightintodiversity.com.
Having earned his bachelor’s degree in electrical engineering from the University of South Carolina, Michael Myers is now pursuing a master’s of science in engineering management at his alma mater and hopes to earn a PhD in the near future. As the first engineer in his family, he wants to share his passion with others.

“I plan to become a project manager within the engineering field so that I can help inspire my future co-workers and students who have similar expectations and goals,” Myers says. “I’d also enjoy mentoring students interested in STEM and helping them learn more about those fields.”
As the conversations around student learning outcomes and the shifting higher education landscape continue, it is important to work with a market leader who can provide valid and reliable data for accreditation and other accountability initiatives. If your institution does not have an established, research-based assessment program, it's time.

**Measure core skills for accreditation and more in just one, efficient test session!**

The ETS® Proficiency Profile is a general education outcomes assessment for undergraduate students that is designed to measure student learning outcomes in a single, convenient test. It provides timely feedback on the four core skills needed for success in academia and beyond: reading, writing, mathematics and critical thinking.

**Test anywhere, anytime and get actionable data to meet your assessment needs.**

Choose the type of test that works best for you: proctored on-campus, proctored off-campus or nonproctored online. The abbreviated form takes just 40 minutes and delivers reliable, powerful group-level data. The two-hour standard version gives you a more robust array of data, and provides a more in-depth view of individual-level performance. Best of all, no matter which version you choose, you get insightful reports PLUS comparative data for 550,000 students at more than 500 institutions nationwide.

**Learn more about ETS Proficiency Profile at [www.ets.org/learning_outcomes](http://www.ets.org/learning_outcomes).**
It starts with people like molecular evolutionary biologist Hsiu-Ping Liu, Ph.D., an MSU Denver associate professor of biology. As director of the University’s Center for Advanced STEM Education, she shares her excitement about science especially with underrepresented groups of middle school and high school students, showing them real-world applications for STEM-related fields and introducing them to the possibility of college and careers in science.

MAKE CHANGE HAPPEN. BEGIN AT MSU DENVER.
msudenver.edu