

[Available for publication and/or web posting]

Higher education trailblazer to receive 2018 Harriet Tubman Award

Stephanie G. Adams honored for efforts to diversify field dominated by white males

Early in her career, Stephanie G. Adams sometimes felt she wasn't being taken seriously.

Truth be told, she didn't exactly fit the mold of the aspiring academic in her chosen field, engineering. She was female. She was black. And, perhaps most significantly, she was drawn to the study of interdisciplinary collaboration and communication – then a little-known (and even *less-appreciated*) pursuit in a profession built upon distinct, largely autonomous specialties: civil engineering, electrical engineering, mechanical engineering, etc.

Adams, however, persevered, and now, some two decades later, she displays no trace of those early doubts about her standing in the profession – for good reason. Her curriculum vitae features a series of administrative appointments – each loftier than the one preceding it – at four blue-chip universities, not to mention a stint at the National Science Foundation. Since July 2016, she has served as dean of the Frank Batten College of Engineering & Technology at Old Dominion University in Norfolk, Virginia.

The wisdom of Adams' career choice – and the depth of her resolve – will be further validated later this month, when the profession that once seemed slow to embrace her work will celebrate her journey from rattled anomaly to renowned authority on engineering education. On June 24, at the annual conference of the American Society for Engineering Education (ASEE), Adams will receive the 2018 Harriet Tubman Award for Advancing African-American Women in Academic Engineering.

The recognition program is sponsored by Harris Search Associates, an Ohio-based consultancy that specializes in the recruitment and advancement of traditionally underrepresented populations in engineering, technology and medicine. Since its founding in 1997, the firm has conducted more than 875 searches, of which 34 percent have resulted in the placement of candidates who were women or racial minorities – or both.

Jeffrey Harris, the firm's founder and managing partner, said he can think of no one more deserving of this year's award – or more representative of its namesake, the famed 19th century abolitionist who risked her life to lead hundreds of slaves and family members to freedom via the Underground Railroad, an elaborate network of safe houses.

"Harriet Tubman admonished us never to stop – to keep going," said Harris, who will travel to Salt Lake City to present the award. "Dean Adams' career is a model for Ms. Tubman's words."

Harris said he'll be "thrilled and honored" to pay tribute to someone who has accomplished so much in such a relatively short span of time. The only disappointment, he added, is that Adams was such a clear-cut choice for this year's award.

"Dr. Adams' ascent to the highest levels of academic leadership is noteworthy in part because it remains an exception to the rule – and that's a tragedy."

Statistics bear out Harris' assessment. When Adams assumed her current role at Old Dominion, she became one of only three female African-American engineering deans in the United States – a startlingly small number given that the nation has about 350 accredited engineering programs. Similarly, African-American women account for just 0.54 percent of the nation's nearly 28,000 engineering faculty members.

Unfortunately, those numbers aren't likely to change any time soon, thanks to an anything-but-robust pipeline.

In 2015, African-American women received just 937 – or fewer than 1 percent – of the 106,658 bachelor's degrees awarded by U.S. engineering programs, according to a 2017 study by Purdue University, the National Society of Black Engineers (NSBE), the Society of Women Engineers (SWE) and the Women in Engineering ProActive Network (WEPAN). Sadly, that figure was *down* from about 1,100 degree recipients a decade earlier.

The scarcity of female African-American engineering students is on full display in a just-released report from the Center for American Progress, *The Neglected College Race Gap*, which analyzed degrees granted from 2013 through 2015.

"Perhaps the most startling finding is the dramatic underrepresentation of black and Hispanic women in engineering relative to white men," the report said. "For black women, only eight of every 1,000 bachelor's degrees are in engineering, compared with 89 of every 1,000 white male bachelor's degrees. This means that over this period, white men received engineering degrees at more than 11 times the rate that black women did."

MORE

The report noted that the numbers weren't much better for Hispanic women: Within that demographic segment, only 14 out of every 1,000 bachelor's degrees were in engineering.

"All told, if black and Hispanic women received engineering degrees at the rate of their white male counterparts, about 30,000 more women of each race would have earned engineering degrees from 2013 through 2015. That would be a tenfold increase for black women and a fivefold increase for Hispanic women, given that only about 3,000 black women and 6,000 Hispanic women graduated with engineering degrees over this period."

To make matters worse, one out of four female engineers drops out of the workforce before she reaches traditional retirement age, contributing to an attrition rate that far exceeds that of male engineers.

The Purdue/NSBE/SWE/WEPA study found that African-American females in engineering face a variety of challenges, including stereotyping, tokenism, isolation and an innate sense of not belonging. Another factor, according to the researchers, is biculturalism: "Women of color are implicitly expected to behave differently at work and at home; this leads to managing the contexts of both European American and African American culture."

What's more, the report noted, female engineers are likely to encounter systemic pay inequities. On average, white women make 78 percent of white men's salaries, while black women make 64 percent.

Harris said his approach to recruiting and placing members of traditionally underrepresented populations is shaped by what he has seen – good and bad – over the past two decades.

"Attracting and retaining diverse leaders requires a disciplined strategy to support their assimilation into an institution," he said. "We work in close partnership with our clients to develop a detailed plan to allow these leaders to flourish."

Harris said the plans that prove most effective share the same basic elements: targeted recruitment and hiring, often at historically black colleges and universities; diversity and inclusion training for all associates, at all levels of the organization; an active engagement in professional organizations; and mentoring that encourages networking – both within the institution and beyond.

Adams endorses the notion that positive reinforcement from the profession can make a huge difference.

The dean noted that even after entering academia, she continued to feel somewhat out of place for several years.

"It was a challenge to be just one person researching a topic in an area no one understood yet," Adams said in a 2015 interview conducted as part of the "Engineering Education Pioneers" project, a joint initiative of the National Science Foundation (NSF) and the Center for Engineering Learning & Teaching (CELT) at the University of Washington.

"I don't think anybody took my work seriously because it wasn't what people were expecting. There were pockets of people doing engineering-education research, but it wasn't a readily available discipline that people could go into."

Adams said everything changed in 2003 when she received the NSF's CAREER award, which enabled her to develop and test a model for the promotion of effective team-based learning in the engineering classroom.

Suddenly, Adams said, "people really took my work seriously and realized that this is serious and important work." Before long, she added, "people were interested in having me talk to their students about teaming – and in collaborating with me."

Accepting the Harriet Tubman Award is just one of the items on Adams' agenda at this month's ASEE gathering in Salt Lake City. The conference also will mark the formal start of the dean's tenure as president-elect of the 125-year-old organization. After a year in that role, she'll move up to the presidency.

Adams intends to exploit her newfound bully pulpit in the ongoing battle to bring equal opportunity to engineering.

"We must continue to encourage and engage with young girls," Adams wrote in a recent guest column for her local newspaper, *The Virginian-Pilot*. "We must convey to them the importance of what engineers do and that engineering is everywhere and in everything we see and do. We must create opportunities for them to tinker, to break things and to question how things work. We need practicing engineers to serve as role models for girls and young women. We need community leaders and organizations to continue to create and support programs, camps and initiatives.

"We must make it clear that promoting engineering for women is a priority."

###