

# Women in Engineering 1911-2020

In the centennial celebration of the ratification of the 19th Amendment, which took place two short miles from our campus, we thought it important to reflect on the past 110 years of women in the School of Engineering. We did not make it easy for women, a fact no one is proud of anymore and should never have been proud of originally. We have heard the retelling of comments by professors to young women that they were too emotional, not smart enough, had to sit in the back row, looking for a husband, or otherwise not “cut out” for engineering study. We know too few women were enrolled to provide a suitable peer network of support, nor were there effective role models or mentors to provide advice.

Women have been attending the School of Engineering for over a century. The first female student on

record who enrolled was Trevania Dallas Smith in 1911. That same year, Anne Dallas Dudley, her elder sister, formed the Nashville Equal Suffrage League. Anne would later lead a march of 2,000 women from downtown Nashville to Centennial Park, the first suffrage parade in the South, and became a mobilizing force in the Tennessee and U.S. movements. In this time of mindful reflection on women in STEM, racial justice and gender equality, we highlight a few of our notable alumnae who persisted against the headwinds of a male-dominated field, and who succeeded in spite of messaging they could not. This list certainly is far from complete because it took the participation of every woman to enable the evolution of our academic environment, and we owe each one our gratitude, however belated.

Yes, women often had to work harder and were held to higher standards than their male counterparts. It should not have been that way, and it should not be that way. We would like to believe times have changed. And to a degree,

they have. We are approaching equal representation of women vs. men in undergraduate enrollment. The diversity of our student and faculty populations has never been greater. Intentional support networks exist now where none or few used to be. Formal and informal mentoring and individualized support efforts are better organized and more available.

Are we done? Have we arrived at an environment where our female students of all races and backgrounds feel equally supported and have equal opportunity to succeed? Certainly not. However, we are working very hard toward these goals. The investments in effort and resources to create such an environment have never been greater, the stakes never higher. The collective conscience is starting to pay attention. As our stakeholders, we need to hear from you, we want your input, we will continue to listen to your stories, and you must continue to tell them. To our alumnae already involved in this effort, thank you! Together, we can do this. **V**



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**1911—Trevania Dallas Smith**—First woman, on record, to enroll in the School of Engineering as a special student during the 1911-12 academic year. She became a landscape designer.

**1914—Harriet Fogle** arrived on campus in her roadster to study in engineering. Left school before graduating and did not return. During WWI she served as an ambulance driver for the Army Air Corps.

**1929—Frances Long** enrolled in civil engineering. Left school at end of junior year.

**1945—Vera Jane Jones (Mackey)**, BA'44, BE'45, earned a B.E. degree in engineering and went to work for TVA as their first woman engineer.

**1946—Patricia (Brown) Baker** earned a B.E. in mechanical engineering. The first woman to complete a four-year curriculum and graduate. First woman P.E. in Tennessee. She became an engineer for Chance-Vought Aircraft.

**1963—**The youngest female graduate of the school, **Joyce Ann Hill Taylor**, BE'63, graduates at 19.

**1963—**Honors program adopted, **Susan Porzelius**, BE'65, was the first student to participate.

**1970—**First Ph.D. in engineering earned by a woman: **Ann Alsbrook Hicks**, in civil engineering.

**1973—****Leslie Ann (Freeman) Benmark** was a computer science instructor from 1973-1975; PhD'76 in Systems and Information Science (precursor to CS forming in 1978); director of the university's women in engineering program until 1979.

**1973—****Catherine Connette**, BE'74, becomes the first woman president of the undergraduate Engineering Student Council.

**1975—****Cynthia Ustruck**, BE'75, ChemE, first woman to lead Tau Beta Pi and first recipient of the new Vanderbilt Engineering Honor Scholarship.

**1976—****Rebecca Jane Bowers**, BE'76, ES, is the first woman as a third generation Vanderbilt Engineering undergraduate in the same family.

**1977—****Mary Yarbrough**, BE'77, MD'81, named Henry Luce Scholar.

**1979—****Jane Martin**, BE'79, worked on the successful effort to preserve Radnor Lake as a State Natural Area.

# Notable Alumnae



## Maryly Van Leer Peck, BE'51

- First woman to graduate with four-year degree in chemical engineering
- Worked at Rocketdyne and U.S. Naval Research Lab, formulated rocket fuel for the space program
- First woman named president of a Florida community college



## Yvonne Young Clark, MS'77

- First woman to earn a master's degree in engineering management



## Sandy Cochran, BE'80

- Majored in chemical engineering
- Former Army paratrooper
- CEO, Cracker Barrel



## Krista Donaldson, BE'95

- Majored in mechanical engineering
- CEO, D-Rev, which designs and develops medical technologies for underserved populations around the world
- *Fast Company's* "50 Designers Shaping the Future," World Economic Forum Tech Pioneer



## Erica Brown Wagner, BE'00

- Majored in biomedical engineering
- Blue Origin, Payload Sales Director
- National Academies Standing Committee on biological and physical sciences in space



## Abbey Carlson, BE'20

- Majored in mechanical engineering
- Award-winning Vanderbilt Aerospace Design Lab, Vanderbilt Women's Golf team, and pilot
- Advanced design engineer on the Space Launch System at Boeing's north Alabama facility



## Mia (Canariis) Hardcastle, BE'56

- Majored in mechanical engineering
- First female engineering student to earn a Founders Medal
- First woman president of the Engineering Alumni Council



## Cynthia (CJ) Warner, BE'80

- Majored in chemical engineering
- President and CEO of Renewable Energy Group Inc., a leading provider of lower carbon-intense products and services
- Member, Board of Visitors of the Vanderbilt University School of Engineering



## Amelia Cousins Greenhall, BE'09

- Majored in electrical engineering
- User experience designer, user interface designer and data scientist
- Cofounded feminist tech blog and publication Model View Culture and Double Union, a feminist women-only hackerspace in San Francisco



## Cathy Jo Thompson Linn, BS'74, MS'78, PhD'80

- Worked for IBM, was a faculty member at SMU and SW Louisiana, then moved to the Institute for Defense Analyses
- Recruited to Microsoft in 1990, key developer on Object Linking and Embedding and Windows CE



## Kimberly Bryant, BE'89

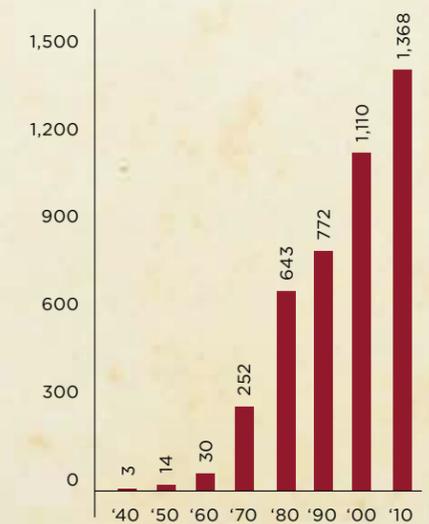
- Majored in electrical engineering
- Founder, Black Girls CODE, which plans to train 1 million girls by 2040
- *Forbes* magazine's "40 Women over 40" to watch, *EBONY'S* "Power 100," *Marie Claire* magazine's 20 women changing the world, CNN 10: Visionary Women



## Leslie Labruto, BE'11

- Majored in civil engineering
- Leads efforts for Acumen, an NGO, to provide access to energy with low-cost home solar projects in Southeast Asia and sub-Saharan Africa
- Young alumni trustee on Vanderbilt's Board of Trust

## Engineering Degrees Granted to Women, by Decade



# 4,192

## Total Degrees Granted to Women in 75 Years

