

# Women in Engineering

Challenging and Changing Underrepresentation

# OSHWA's Aim:

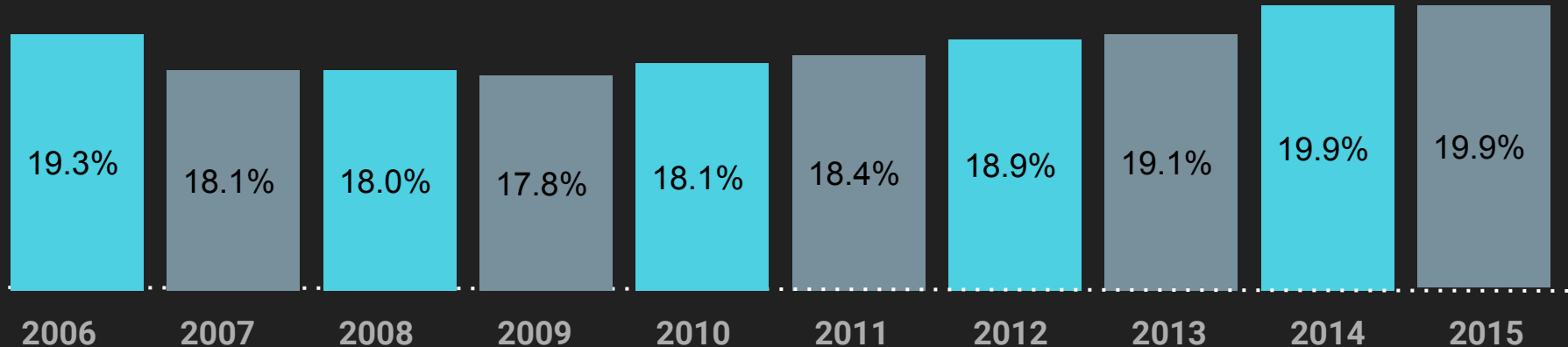
Promote accessibility of technical knowledge and collaboration for technological development.<sup>[1]</sup>

[1] "About." Open Source Hardware Association. N.p., 20 Oct. 2014. Web. 05 Oct. 2016.

# Women comprise less than 20% of Bachelor's degree awardees over the last 10 years

Similar numbers for Master's and Doctoral Degrees <sup>[2]</sup>

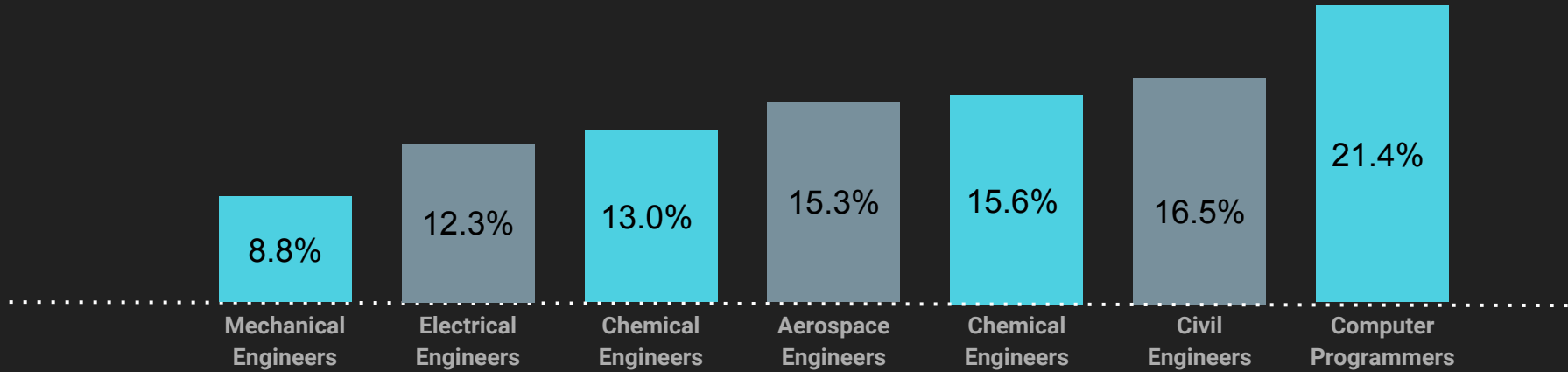
Percentage of women awardees (Bachelor's):<sup>[2]</sup>



[2] Yoder, Brian L. "Engineering by the Numbers." [www.asee.org](http://www.asee.org). *American Society for Engineering Education*, n.d. Web. 03 Oct. 2016.

# Industry takes the hit as well

Women exit from engineering jobs at a higher rate (38.8%) than men.<sup>[3]</sup>  
Percentage of women in industry in 2014: <sup>[4]</sup>



[3] Franzway, Suzanne, et.al. "Engineering Ignorance: The problem of gender equity in engineering." *Frontiers: A Journal of Women Studies* 30.1 (2009): 89-106 Academic Search Premier. Web. 31 st October 2011.

[4] United States. Dept. of Labor. Women's Bureau. Data and Statistics. "Non-traditional (male-dominated) occupations, 2014 annual averages." N.p.,N.d., Web. 5 Oct. 2016.

# Why should we care?

Diverse teams have been linked to being more creative and better performing than the homogenous teams <sup>[5]</sup>.

Diverse Perspectives

Judicious Use of Talent

Creating Relatable Role Models

# A solution

**Representation** plays a critical role in promoting diversity in STEM. Lack of female role models and their low visibility can discourage young women from pursuing higher education in engineering.<sup>[6]</sup>

Developing a **sense of belonging** among women can possibly help in **retention**.

# *Over the years, multiple organizations have been formed to promote women in engineering*

1905

Nora Stanton Blatch Barney graduated from Cornell University as a Civil Engineer

1997

Anita Borg Institute for Women and Technology was founded

1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010

1950

Society of Women Engineers was founded

1994

IEEE Women in Engineering Program started

# University of Illinois at Urbana-Champaign

## Maker Girl

Focuses on exposing young girls (ages 7 to 10) to 3D printing, technology and women leaders in STEM.

Website:  
[makergirls.us](http://makergirls.us)

## Miss Possible

Dolls of real role models in STEM to inspire young girls and boost their confidence about possibilities in STEM.

Website:  
[bemisspossible.com](http://bemisspossible.com)

## WIMSE

A Living Learning Community in one of the on campus residence halls. Women in STEM get to interact and collaborate with each other.

Website:  
[housing.illinois.edu/living-options/living-learning-communities/wimse](http://housing.illinois.edu/living-options/living-learning-communities/wimse)

## WIE

WIE oversees multiple organizations like SWE, Women in ECE, organizes freshmen women engineer camp.

Website:  
[engineering.illinois.edu/wie/](http://engineering.illinois.edu/wie/)



# Woman Engineer Statue

*In June 2013, I proposed the idea of a Woman Engineer Statue to the College of Engineering.*

*Motivation: Let young girls see themselves represented in the engineering community.*

# Woman Engineer Statue

## **3 Years Later...**

*A **racially inclusive** statue to include women from various backgrounds to feel represented.*

*Lessons from this experience:*

- Acknowledgement of privilege*
- Importance of voicing opinions*

As individuals, we can all contribute to challenge and change underrepresentation

