SOLVING THE EQUATION

The Variables for Women’s Success in Engineering and Computing
Focus on Engineering and Computing
FIGURE 5. INTENT OF FIRST-YEAR COLLEGE STUDENTS TO MAJOR IN STEM FIELDS, BY GENDER, 2014

AAUW analysis of Eagan et al. (2014).
FIGURE 6. BACHELOR’S DEGREES EARNED BY WOMEN, SELECTED FIELDS, 1970–2013

Note: “All science and engineering” includes biological and agricultural sciences; earth, atmospheric, and ocean sciences; mathematics and computer science; physical sciences; psychology; social sciences; and engineering.
Source: L. M. Frehill analysis of data from National Science Foundation, Division of Science Resources Statistics (2013), and National Science Foundation, National Center for Science and Engineering Statistics (2014a).
Figure 1 notes: Postsecondary teachers are not included.

African-American and Hispanic women are particularly underrepresented.

Figure 9 notes: Charts include only U.S. citizens and permanent residents.

Figure 9 sources: L. M. Frehill analysis of National Science Foundation, National Center for Science and Engineering Statistics (2014b), and U.S Census Bureau (2014d).
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Figure 14 source: Moss-Racusin, Dovidio et al. (2012a).
FIGURE 15. PROBABILITY OF SELECTING THE BEST CANDIDATE FOR A MATHEMATICAL TASK

Source: Reuben et al. (2014a)
Gender biases affect how we view ourselves.
Stereotype Threat at Work
Making the World a Better Place
Sense of Belonging
FIGURE 23. FEMALE COMPUTER SCIENCE GRADUATES NATIONALLY AND AT HARVEY MUDD COLLEGE, BY GRADUATION YEAR, 2000–2014

- **Female computer science graduates nationally**
- **Female computer science graduates at Harvey Mudd College**
What can colleges do?

- Revise introductory courses and make accommodations for prior experience
- Provide research opportunities for undergraduates
- Take students to conferences and events where they can meet role models and peers
Figure 11 notes: Includes only individuals who reported a bachelor's degree in engineering and no additional educational credential as of 2010.

Figure 11 source: L. M. Frehill analysis of National Science Foundation, National Center for Science and Engineering Statistics (2010a, 2010b).
Figure 25 note: Scale from 1 (never) to 6 (every day). Participants estimated the frequency with which they experienced undermining behaviors in the past month and the frequency with which they observed sexist behavior in the past year.

Sources: Fouad et al. (2012)
What can we do?

- Implicit bias
- Stereotype threat
- Incorporate communal values
- Cultivate a sense of belonging
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