The engineering community has been working for decades to increase the representation of women in universities and in the profession, but progress has been slow. In the United States, just 21 percent of engineering bachelor’s degrees go to women, and only 11 percent of practicing engineers are women. While the problem is complex, we must recognize that one significant factor is sexual harassment, which creates hostile education and work environments and pushes women out of the field. Authoritative studies have documented that from 20 to 50 percent of women students experience sexual harassment in higher education. Sexual harassment encompasses more than the shocking physical assaults that have made headlines in recent years; it also includes a wide range of offensive, crude, and sexist behaviors that demean women. Through these behaviors, harassers communicate that women do not belong and do not merit respect. This “gender harassment” is by far the most common type of sexual harassment. Some people may think that words never hurt, as the old “sticks and stones” children’s rhyme suggests, but research demonstrates that frequent or severe gender harassment can have the same level of negative outcomes as an instance of sexual coercion. What’s more, gender harassment telegraphs an organizational climate that tolerates other forms of sexual harassment. A recent report released by the National Academies of Sciences, Engineering, and Medicine, for which two of us served as authors, found that sexual harassment has broad impacts. It affects not only the women who are targeted but also bystanders and the entire research enterprise.

More than 30 years of research—summarized in the National Academies report—demonstrates that sexual harassment undermines women’s educational and professional success, while also harming their mental and physical health. When students experience sexual harassment, they often become less motivated to attend class, pay less attention in class, receive lower grades, drop classes, change advisors, change majors, transfer to other educational institutions, or drop out entirely. In the workplace, sexual harassment causes women to be less satisfied with their jobs, become disillusioned or angry with their organizations, experience increased job stress, and exhibit decreases in productivity and performance. Some women withdraw from their workplaces physically or mentally, some consider leaving their jobs, and some actually do so. Obviously,

Sexual harassment is a threat to engineering

A National Academies report finds that it’s not just individuals who suffer when gender-based abuse goes unaddressed.
these outcomes can significantly impede a woman’s success in engineering and can result in her leaving the field.

Harassment has consequences that ripple outward. Research shows that ambient sexual harassment in the workplace can negatively influence other employees’ job satisfaction and psychological well-being, result in higher levels of absenteeism and intentions to quit, and make employees more likely to leave work early, take long breaks, and miss meetings.

Sexual harassment also damages research integrity, and an earlier National Academies publication defined it as a violation of professional standards in this domain. Our report therefore calls for institutions to consider sexual harassment to be equally important as research misconduct, which includes unacceptable behaviors such as falsification, fabrication, and plagiarism. Ensuring the integrity of research requires serious attention to sexual harassment as well as research misconduct. And serious attention to sexual harassment means addressing the ways in which environments tolerate it and holding accountable those responsible.

Addressing sexual harassment in all its forms is a crucial step toward solving the gender imbalance in engineering. We call on the engineering community to implement the systemwide changes recommended in the recent National Academies report (available at www.nap.edu/sexualharassment). We must do this not only for the benefit of women but also for the good of our entire profession.

— C.D. Mote Jr., Sheila E. Widnall & Ed Lazowska

C.D. Mote Jr. is president of the National Academy of Engineering. Sheila E. Widnall, Institute Professor and professor of aeronautics and astronautics at MIT, and Ed Lazowska, Bill & Melinda Gates Chair at the University of Washington, are two of the authors of the National Academies report Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine.

THE IEEE PRESIDENTS’ STATEMENT

EARLIER THIS YEAR, the U.S. National Academies of Sciences, Engineering, and Medicine published a significant consensus study report titled Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. The adjacent article by the president of the National Academy of Engineering and two of the report’s authors reflects on their findings.

We applaud the National Academies for undertaking this comprehensive examination of sexual harassment in academic sciences, engineering, and medicine, and its effects on women’s well-being, their careers, and the scientific enterprise.

Sexual harassment in both academia and industry continues to be a critical challenge for women in engineering. The cumulative effect is well documented to include significant damage to research integrity and a costly loss of talent.

At IEEE, we are committed to maintaining a culture that is diverse, inclusive, and respectful. This includes efforts aimed at improving transparency and accountability, encouraging strong and diverse leadership, and inspiring all members of the engineering community to be responsible for reducing and preventing harassment.

All IEEE members share a common code of ethics that commits us “to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression; to avoid injuring others, their property, reputation, or employment by false or malicious action; [and] to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.”

Harassment and discrimination of any kind undermine us all. At IEEE, we strive to advance a professional environment where all individuals feel welcome and safe and are able to contribute to the best of their abilities.

Regards,

JIM JEFFERIES
2018 IEEE President and CEO

JOSE M.F. MOURA
2018 IEEE President-Elect

KAREN BARTLESON
2018 IEEE Past President