



The National Academies of
SCIENCES • ENGINEERING • MEDICINE

**SYMPORIUM ON PROMISING PRACTICES FOR ADDRESSING THE UNDERREPRESENTATION OF
WOMEN IN SCIENCE, ENGINEERING, AND MEDICINE:
OPENING DOORS**

Virtual participation: <https://www.nationalacademies.org/event/03-19-2020/symposium-on-addressing-the-underrepresentation-of-women-in-stem>

March 19, 2020

This symposium will share the key messages and findings of a recent National Academies report focused on addressing the underrepresentation of women in science, engineering, and medicine, which was made possible by the sponsorship of the National Institutes of Health, the National Science Foundation, and L'Oréal USA. Among the key issues the report addresses are:

- How women's participation and leadership varies across scientific, engineering, and medical disciplines
- How the intersection of race and gender affects women of color in science, engineering, and medicine
- Which interventions can produce sustained improvements in the representation and leadership of women in science, engineering, and medicine
- Why effective interventions haven't been successfully adopted by more institutions

The day's event will feature presentations of the latest research and in-depth discussion with experts and leaders on the state of knowledge on the range of issues addressed in the National Academies study. The symposium will highlight the recommendations put forth by the report's authoring committee on how to drive greater equity and diversity in science, engineering, and medicine through systemic change.

8:30 – 9:00 A.M. Registration and Networking

9:00 – 9:10 A.M. Welcome from the National Academies of Sciences, Engineering, and Medicine

- Marcia McNutt, Ph.D., President, National Academy of Sciences

9:10 – 9:30 A.M. Overview of key takeaways from the National Academies consensus report: *Promising Practices for Addressing the Underrepresentation of Women in Science, Engineering, and Medicine: Opening Doors*

- Rita Colwell, Ph.D., Study Committee Chair, Distinguished University Professor, University of Maryland at College Park and Johns Hopkins University Bloomberg School of Public Health; former Director, National Science Foundation; former Chair,

National Academies Committee on Women in Sciences,
Engineering, and Medicine

9:30 – 10:30 A.M. Why do we see different patterns of representation and advancement in different scientific, engineering, and medical disciplines?

Panel theme: Why is it that, as of 2018, women accounted for only 18 percent of hospital CEOs and 16 percent of deans and department chairs, despite the fact that women have made up at least 40 percent of U.S. medical students for more than 25 years? Why is it that despite the fact that women perform as well or better than men on standardized tests in math throughout high school, and earn better grades in math in college, women only make up about 20% of graduates and faculty in math intensive STEM fields like engineering, computer science, and physics? And why is it that even as the share of science and engineering degrees earned by women of color has more than doubled at all levels of education, the numbers are still dwarfed by the number of STEM degrees earned by white women. This session will address these questions and present an overview of the research underlying the shared and unique factors that contribute to the underrepresentation and lack of advancement of women, particularly women of color, in various scientific, engineering, and medical disciplines.

- Janis Orlowski, M.D., Chief Health Care Officer, Association of American Medical Colleges
- David Miller, Ph.D., Researcher, American Institutes for Research
- Andrei Cimpian, Ph.D., Associate Professor of Psychology, New York University
- Vivian Pinn, M.D., Study Committee Member, Founding Director (retired), Office of Research on Women's Health, National Institutes of Health; former member, National Academies Committee on Women in Sciences, Engineering, and Medicine **(session moderator)**

**10:30 – 11:10 A.M. Effective Institutional Practices for Addressing Gender Disparities
Part I: Educational Interventions, Mentoring, and Role Models**

Panel theme: This panel session will focus on strategies and practices that have proven effective in retaining and recruiting more women in science, engineering, and medical fields by increasing sense of belonging. In particular, this panel will explore research on curricular interventions and the positive impact of mentorship and role models, including the impact of fictional role models as depicted in the media.

- Renetta Tull, Ph.D., Vice Chancellor of Diversity, Equity and Inclusion, University of California, Davis

- Amanda Diekman, Ph.D., Professor of Psychological and Brain Sciences, Indiana University Bloomington
- Maria Dahlberg, M.S., Program Officer, Board on Higher Education and Workforce, National Academies of Sciences, Engineering, and Medicine and Study Director for the National Academies Report: *The Science of Effective Mentorship in STEM* (**session moderator**)

11:10—11:15 A.M. Introduction of NIH Director

- Janine Clayton, M.D., Director, Office of Research on Women's Health, National Institutes of Health

11:15—11:25 A.M. Address by NIH Director

- Dr. Francis Collins, M.D., Ph.D., Director, National Institutes of Health

**11:25—12:30 P.M. Effective Institutional Practices for Addressing Gender Disparities
Part II: Recruitment, Retention, and Advancement**

Panel theme: This panel session will focus on programs and practices aimed at improving the representation of women students and faculty across science, engineering, and medical disciplines. The speakers will review the current state of knowledge on the policies, resources, and strategies that research and practice have demonstrated can “move the needle” on women’s recruitment, retention, and advancement in tangible ways. The speakers will address why such efforts have had a greater positive impact for white women, relative to women of color, and discuss how these practices and strategies can be modified to better support all women.

- Joan Williams, J.D., Distinguished Professor of Law, Hastings Foundation Chair, and Founding Director of the Center for WorkLife Law at the University of California
- Elizabeth Travis, M.D., Associate Vice President for Women and Minority Faculty Inclusion and Mattie Allen Fair Professor in Cancer Research at the University of Texas, M.D. Anderson Cancer Center
- Gilda Barabino, Ph.D., Study Committee Member, Daniel and Francis Berg Professor and Dean, The Grove School of Engineering, The City College of New York; current member, National Academies Committee on Women in Sciences, Engineering, and Medicine (**session moderator**)

12:30 – 2:00 P.M. Lunch Break

2:00 – 3:00 P.M. Overcoming Common Institutional Barriers to Sustainably Implementing Effective Policies, Practices, and Strategies: The Importance of Leadership and Accountability

Panel Theme: For decades now, sustained investments from foundations, nonprofits, government agencies, and others have supported efforts to improve the representation of girls and women in science, engineering, and medical fields. Why is it then that many scientific, engineering, and medical fields have seen only modest improvement in the representation and leadership of women? This panel will explore the common institutional barriers to sustainably, implementing effective policies, practices, and strategies and offer guidance on how such barriers can be overcome. Among the key topics the speakers will explore is the importance of leadership and accountability in driving and sustaining positive change and the importance of taking an intersectional approach to ensure that efforts to improve equity and diversity benefit all women.

- Tasseli McKay, MPH, Social Science Researcher, Division of Applied Justice Research, RTI International
- Frank Dobbin, Ph.D., Henry Ford II Professor of the Social Sciences, Harvard University
- Darla Thompson, Ph.D., Project Director, SEA Change Biomedicine, American Association for the Advancement of Science
- Alex Helman, Ph.D., Program Officer, Committee on Women in Science, Engineering, and Medicine, National Academies **(session moderator)**

3:00 – 4:00 P.M. Making a Difference: How Some Have Driven Change

Panel Theme: We know that driving change for women in science, engineering, and medicine is not easy. However, some leaders have been successful in changing cultures to benefit women in these disciplines. This panel will highlight leaders who have adopted programs and practices that have had great impact on women in science, engineering, and medical disciplines. Panelists will explore what factors facilitated their success, where they had particular difficulties, and what audience members can do to facilitate institutional change?

- Joan Y. Reede, M.D., M.S., M.PH, MBA, Dean for Diversity and Community Partnership, Harvard Medical School
- Abdalla Darwish, Ph.D., Presidential Professor, Dillard University

- Billy Williams, M.S., Study Committee Member, Vice President for Ethics, Diversity, and Inclusion, American Geophysical Union (**session moderator**)

4:00 – 4:20 P.M. Remarks from the Study Sponsors: The National Institutes of Health, The National Science Foundation, and L’Oréal USA

- Janine Clayton, M.D., Director of the Office of Research on Women’s Health, National Institutes of Health
- Suzi Iacono, Ph.D., Head of the Office of Integrative Activities, National Science Foundation

4:20 – 4:30 P.M. Closing Remarks

- Ashley Bear, Ph.D., Study Director and Senior Program Officer, Committee on Women in Science, Engineering, and Medicine, National Academies of Sciences, Engineering, and Medicine

4:45 P.M. Meeting Adjourns