

Research Reports

Hill, Catherine, Christianne Corbett and, Andrasse St. Rose. 2010. "Why So Few? Women in Science, Technology, Engineering and Mathematics." AAUW:
<http://www.aauw.org/research/upload/whysofew.pdf>

Synopsis: In spite of the growing participation of women in the science, technology, engineering and mathematics disciplines, women's participation in the important positions are limited, and they continue to be outnumbered by men. This report investigates this concern by drawing from eight research findings. The primary research question is: *what are the social and environmental factors that impact women's underrepresentation in science, technology, engineering and mathematics disciplines?* The findings suggest that: (a) women's interest and success in science and mathematics are considerably influenced by their social environment; (b) in academic institutions, pro-gender policy and structural changes and alter and improve the recruitment, retention and performance of women in STEM disciplines; and (c) gender-based stereotypes and biases significantly deteriorate women's interests and achievements in science and engineering disciplines. This report provides good recommendations for institutional changes in order to promote gender relations and gender-based performances in the STEM disciplines.

Upcoming National or International Events

Event: *Purdue Conference for Pre-Tenure Women*

Location: Purdue University, West Lafayette, IN, USA

Date: September 23, 2010

Description: The Purdue Black Cultural Center, Latino Cultural Center and Native American Education and Cultural Center, in collaboration with the Susan Bulkeley Butler Center for Leadership Excellence, the Diversity Resource Office, ADVANCE-Center for Faculty Success and the Women's Resource Office, are developing the Purdue Conference for Pre-Tenure Women to enhance the success of female faculty, especially in the STEM disciplines, both in higher education nationally and at Purdue. The Purdue Conference is designed to appeal to post-doctoral and pre-tenure women, with a focus on underrepresented women in STEM. The overall conference goal is to provide educational opportunities to support women as they identify strategies towards tenure.

Details: <https://www.science.purdue.edu/pretenureconf.html>

Event: *Women and Science Conference*

Location: Brussels, Belgium

Date: October 19-20, 2010

Description: "Beyond the leaky pipeline – Challenges for research on gender and science" The final conference of the study "Meta-analysis of gender and science research." The purpose of the study is to collect and analyze research on horizontal and vertical gender segregation in research careers, addressing the underlying causes and effects of these two aspects. The main objective of the conference is to present the conclusions of the study and to discuss with experts and policy-makers the possibilities and challenges for European and national research on gender and science and policies towards gender equality in science.

Deadline for abstract submission: May 31, 2010

Details: <http://www.genderandscience.org>

Scholarly Publications

- 1) Minerick, Adrienne R., Mara H. Wasburn and, Valerie L. Young. 2009. "Mothers on the Tenure Track: What Engineering and Technology Faculty Still Confront." *Engineering Studies*. 1(3): 217-235
This paper states that there have been nationwide changes in institutional-level policies and programs in academia to improve the work-life experiences of women faculty members in engineering and engineering technology disciplines. However, women continue to encounter issues in work-life spillover. Therefore the authors ask: *why do work-life challenges for women still persist? and what factors impact the work-life balance of women faculty members negatively?* Data are derived from the survey of tenure-track female faculty who are members of the Women in Engineering Division of the American Society for Engineering Education (ASEE). Analyses are based on both qualitative and quantitative methods. Results show that despite of structural level policy interventions women faculty members in engineering and engineering technology disciplines are much less satisfied with their work-life balance. Findings are interpreted in terms of the gaps between institutional policies and practices. Suggestions for institutional level changes are presented to address these gaps.

- 2) Fox, Mary Frank. 2010. "Women and Men Faculty in Academic Science and Engineering: Social-organizational Indicators and Implications." *American Behavioral Scientist*. 53(7): 997-1012
This study investigates the primary social-organizational characteristics of work among women and men faculty members in science and engineering disciplines. Data are obtained from a current survey of women and men faculty in doctoral-granting departments in computer science, engineering, and science fields in nine highly ranked research-based institutions. Quantitative analyses are conducted. Results present the self-reported perceptions of women and men faculty members on four specific social-organizational aspects of work: (a) conversations with faculty about research in home unit; (b) categorizations and rankings of job positions and departments; (c) descriptions of departmental climates; and (d) extents of tensions between work and family. Among other factors, results are interpreted in terms of institutional policies and programs.

- 3) Abbuhl, Stephanie, Mirar N. Bristol, Hera Ashfaq, Patricia Scott, Lucy Wolf Tuton, Anne R. Cappola and, Seema S. Sonnad. 2010. "Examining Faculty Awards for Gender Equity and Evolving Values." *Journal of General Internal Medicine*. 25(1): 57-60
This research investigates the gendered nature of granting awards to the medical school faculty. The authors argue: since awards are vital indicators for measuring the success and academic achievements among the medical school faculty members, men receive more prestigious awards and accolades as compared to women, and thus power-based gender relations are maintained in the medical academia. Using the data on awards from 1996 to 2007 inclusively at the University of Pennsylvania School of Medicine (SOM), quantitative analyses are conducted. Some of the significant findings reveal that women faculty members received 28% of research awards, 29% of teaching awards and 10% of clinical awards as compared to the men faculty members. Results are interpreted in terms of the gendered characteristics of the traditions of granting awards and the ideas of leadership and excellence in medical academia.