WOMEN IN STEM : BY THE NUMBERS- 2004-2012

According to the data released by the National Science Foundation, the percentage of women enrolled and employed in selected STEM fields like computing and tech has been declining for the past 20 years, thereby increasing the gender gap by a significant amount in these fields. Computer Science is one of the field that is most seriously affected in the past 10 years.

2004

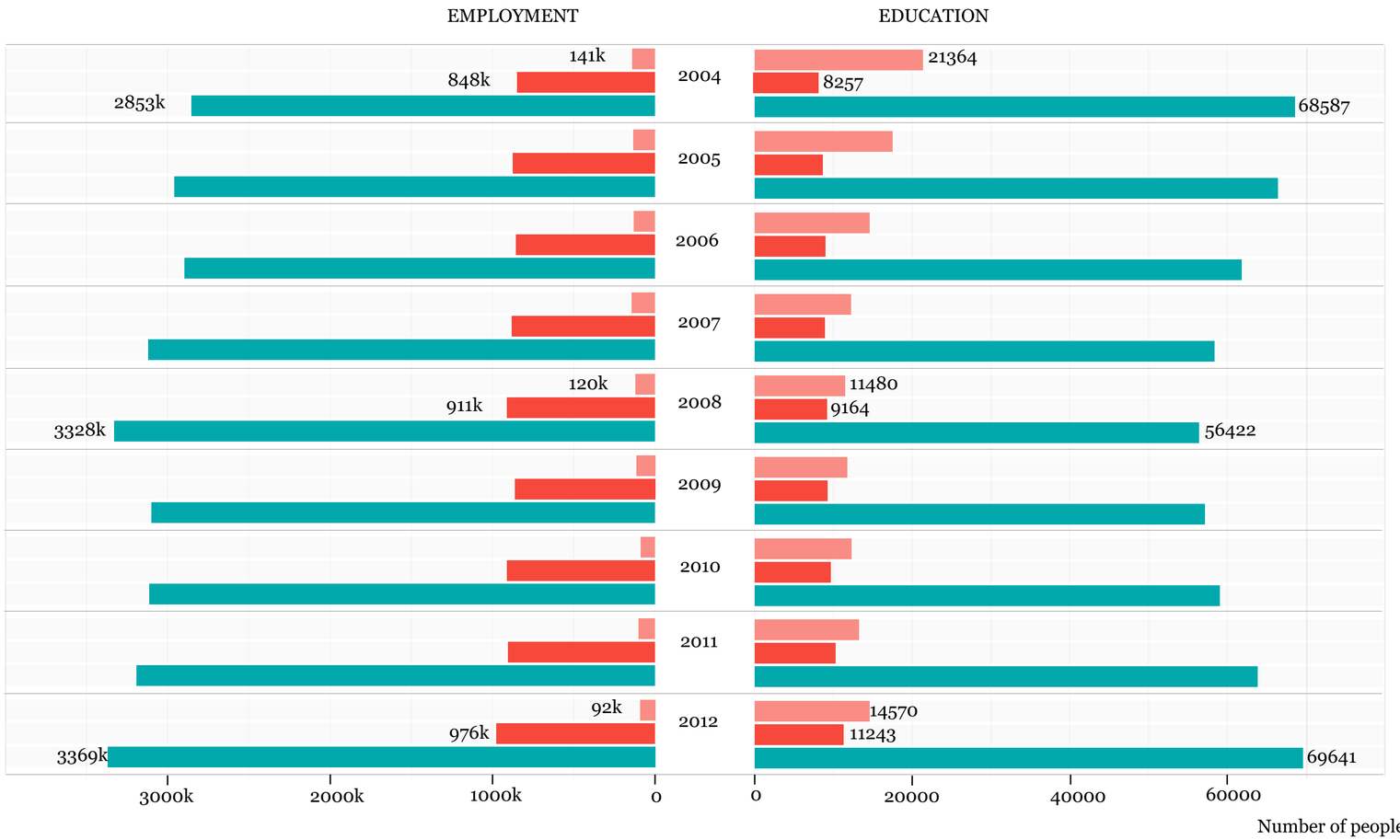
% of women

-5% -1%

% of men

+2%

2012



2004

% of women

-6% -4%

% of men

+3%

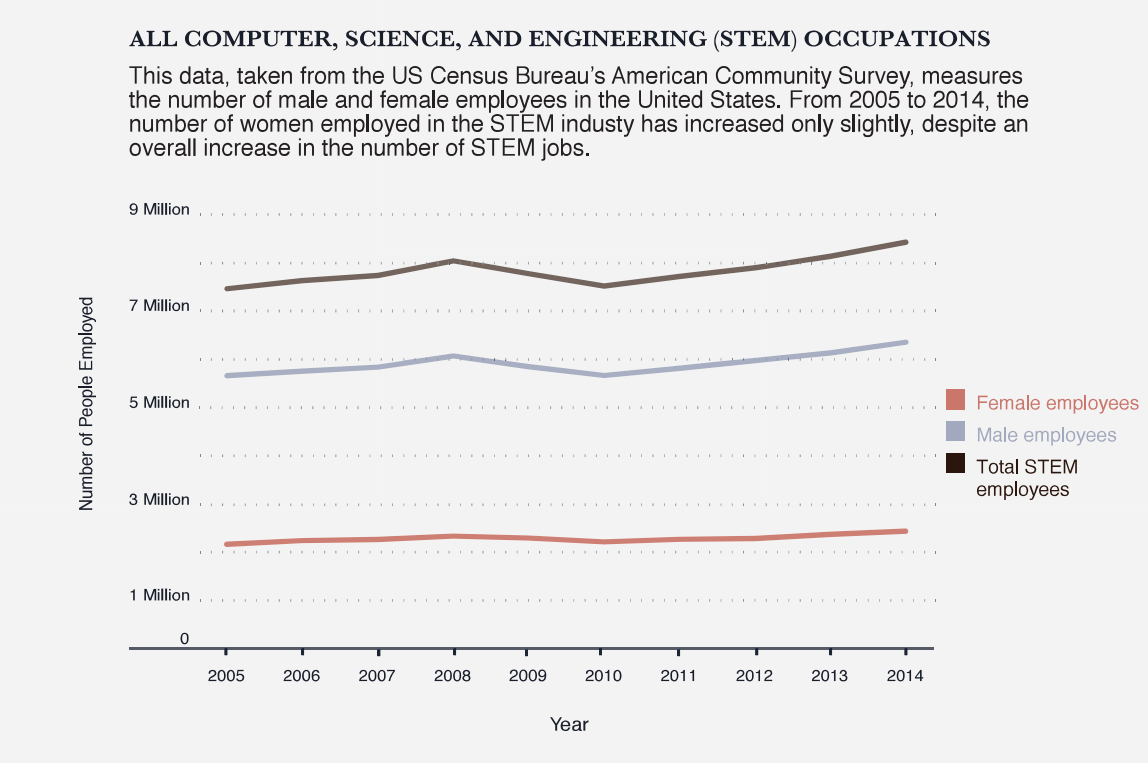
2012

Women Engineers/ Technologist
Women Mathematical or Computer Scientist
Men Engineers, Mathematical & Computer Scientists

Women in Computer Science Engineering
Women in Mathematics and Statistical Sciences
Men in Computer & Mathematical Sciences

Source: National Science Foundation: Women, Minorities, and Persons with Disabilities in Science and Engineering

Where are all the women in STEM?



WOMEN IN STEM

Although women constitute about half of the US labor force (47%), only 25% of them are currently employed in STEM [1]. In some fields like Computer, Mathematics and Engineering this gender gap is increasing significantly as while these occupations haven't shown any significant growth in the number of women entering the industry in the recent years. Increasingly, women employed in STEM are leaving their jobs after some time, thereby causing a decline in the overall percentages of women in these industry. The graphs on the next page show specific sub-categories of the STEM industry. As you can see, the difference between male and female employees is more severe in some sub-categories.

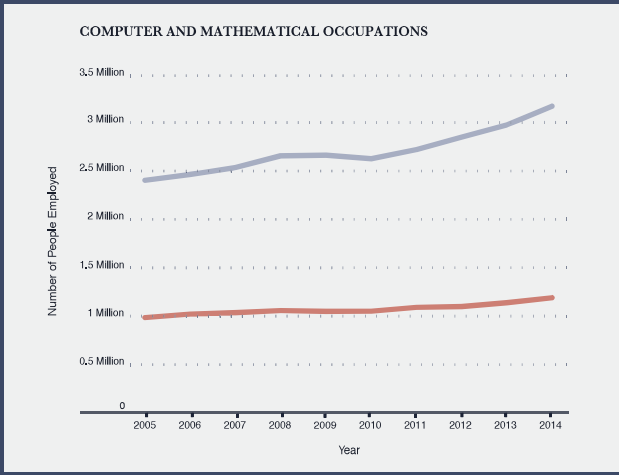
TOP THREE REASONS WOMEN IN STEM LEAVE THEIR JOBS

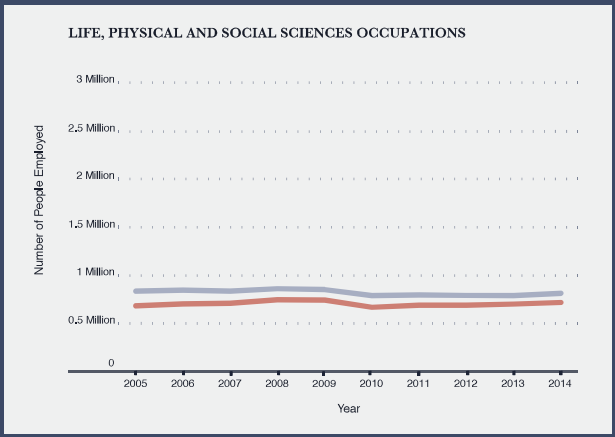
According to the Athena Factor, a research report by HBR [2], about 52% of highly qualified women working in STEM fields quit their jobs due to certain hostile factors like the ones mentioned below:

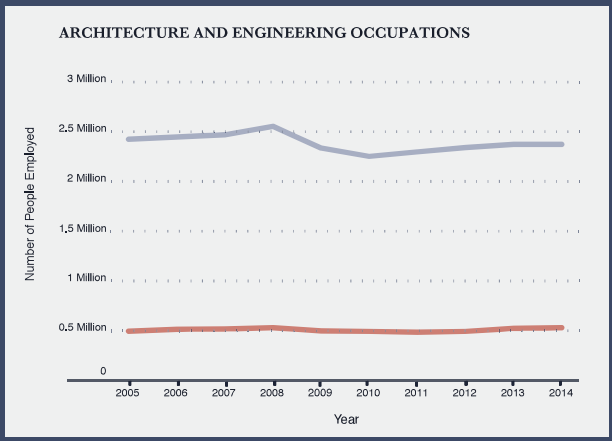
1. Hostile working environment
   Women in STEM have been facing hostile, exlusive male dominated cultures that may even predatory behaviors. 63% of women in the study have reported experiencing sexual harassment [2].

2. Unconscious stereotyping
   Women have faced instances where preexisting beliefs and attitudes towards women as a whole have affected their confidence and performance in the job [3].

3. Isolation
   Women in STEM face lack of mentors and role models to look up to. Also, most of them have faced difficulties acquiring sponsors for their ideas.







WHAT CAN WE DO TO KEEP WOMEN IN STEM?

Leaving behind the stereotypes

Gone are the days when women were considered good only for household work. Now, about 41% of highly qualified scientists, engineers and technologists are women [2]. It's high time that we change the way we talk or even think about women and their capabilities.

Diversity inclusion in recruitment

Organizations should expand their recruiting policies to attract and encourage women to apply for STEM jobs. One such example is Google's recruitment policy for employing a diverse set of people [2].

Mentoring programs

Organizations should develop mentoring programs for every employee that could facilitate an overall professional development as well as a healthy working environment. One example is the Technical Leadership Pipeline Program for Women by Intel [2].

Flexibility in work routine

Inclusion of flexible systems like part-time or telecommuting schedules would help women to balance work and life responsibilities. Examples could be the Freedom to work reform by BT group and flexible leave of absence by IBM [2].

Data Source

US Census Bureau American Community Survey. Occupation by Sex and Median Earnings in the Past 12 Months (In 2005 Inflation-Adjusted Dollars) for the Civilian Employed Population 16 Years and Over (2005-2014): http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_05_EST_S2401&prodType=table

References

[1] D. Beede, T. Julian, D. Langdon, G. McKittrick, B. Khan and M. Doms, "Women in STEM: A Gender Gap to Innovation," U.S. Department of Commerce, 2011.

[2] S. A. Hewlett, C. B. Luce, L. J. Servon, L. Sherbin, P. Shiller, E. Sosnovich and K. Sumberg, "The Athena Factor: Reversing the Brain Drain in Science, Engineering,and Technology," Harvard Business Review, 2008.

[3] C. Ashcraft and S. Blithe, "Women in IT: The Facts," National Center for Women & Information Technology (NCWIT), 2010.

[4] Bureau of Labor Statistics, "Employment Projections: Occupational employment, job openings and worker characteristics," April 2016. [Online]. Available: www.bls.gov/emp/ep_table_107.htm.