

Panel: How to Enhance Diversity in Software Engineering Programs

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From Difference to Diversity

Develop actions and programs that focus less on gender differences and more on creating a culture and environment that embraces diversity

“We are interested in shifting the conversation away from gender differences, which often leads to recommendations to accommodate those differences”

Frieze, Carol, and Jeria Quesenberry. Kicking Butt in Computer Science: Women in Computing at Carnegie Mellon University. Dog Ear Publishing, 2015.

My CMU Experience in 1999

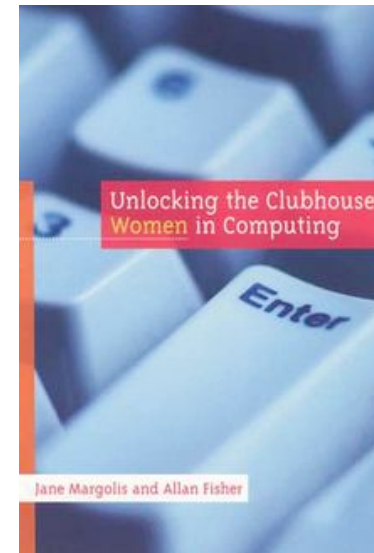
Bachelor of Science in Software Systems Engineering from Icesi University in Cali, Colombia

- ~50/50 male/female

Shocked when I was 1 of 2 women in a cohort of 30 Master of Software Engineering students

My thoughts at the time

- Colombia's economy encourages high-paying degrees in STEM fields
- Fixed high school curriculums include math up to calculus for everybody



Gender divide based on “computing with a purpose” (women) and “dreaming in code” (men)

Margolis, Jane, and Allan Fisher. Unlocking the clubhouse: Women in computing. MIT press, 2003.

Women@SCS at Carnegie Mellon University

Started in 1999 as a response to a 37% female freshmen CS class

- Broadened admissions policy, emphasizing diverse interests along with high achievements in math and science and de-emphasizing prior programming experience

It is not a support group — events combine professional and social activities that help foster community skills and growth

- SCS Day, Big Sisters/Little Sisters, pre-registration event, undergraduate research information sessions, invited speaker series, Outreach Roadshow, TechNights, OurCS



The screenshot shows the homepage of the Women@SCS website. At the top is the logo for Women@SCS, which includes a stylized 'f' and the text 'women@scs' and 'School Of Computer Science Carnegie Mellon University'. Below the logo is a mission statement: 'The Women@SCS mission is to create, encourage, and support academic, social, and professional opportunities for women in computer science and to promote the breadth of the field and its diverse community.' The main content area is divided into two columns. The left column has a 'News' section with a header 'OurCS 2017' and a photo of a group of people. The text describes the 3-day workshop organized by CMU's School of Computer Science and Women@SCS, which took place from October 21st to 22nd. Below this is an 'Interview with Professor Manuela Veloso' section with a photo of Professor Veloso and text about a faculty interview. The right column has an 'Events' section with a header 'TA Panel' and a photo of a panel discussion. The text describes a panel with female undergraduate teaching assistants on November 30th from 4:30pm to 5:30pm. Below this is a 'TechNights' section with a photo of a group of people and text about the fall Open House session titled 'Game Theory - Strategic Voting'. At the bottom of the main content area are two sections: 'Papers' with the link 'Kicking Butt in Computer Science' and 'Outreach Material' with the link 'What is Computer Science Movie'. On the right side of the website is a vertical sidebar with a 'Next Event' section listing the 'W@SCS Meeting' on Thursday 11/16/17 at 4:30PM in GHC 8115. Below this is a 'Highlights' section with links to 'SCS4ALL', 'TechNights', 'New UGrad Students', 'Women of SCS', 'Sponsorship', 'Who We Are About Us', 'Contact Us', 'Alumnae', 'Photos', 'What We Do', 'Calendar', 'Mentoring', 'Social', 'Outreach', 'Conferences', 'Interviews', 'Resources', 'Undergraduate', 'Graduate', 'Fellowships & Grants', 'Job/Research Opportunities', 'Career Advice', 'Papers', and 'Miscellaneous'.

<http://women.cs.cmu.edu>

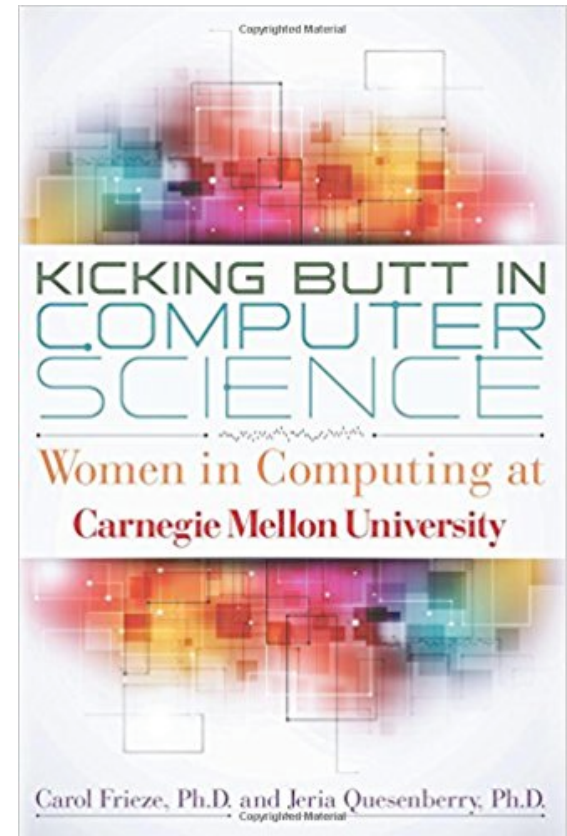
Cultural Change

Areas of balance that have led to cultural change

1. Improved gender balance
2. Broader range of student personalities
3. Enhanced opportunities for women through groups such as Women@SCS

Emergence of the Women-CS/SE fit

- Welcome situation in which women fit into the CS/SE culture, contribute to it, and are successful in the field alongside their male peers



Still More To Do Before and After College

Before

- Parents
 - K-14 Students
 - Teachers
-
- Software Engineering and Computer Science are more than just programming
 - Breaking stereotypes
 - Exciting careers

After

- Industry
 - Alumni
-
- Diversity as a core value of the company
 - Alumni as outreach partners