How to stop driving women out of computing
What happens in your backyard matters!
Panelists

Sarita Adve, Illinois
James Allan, UMass Amherst
Kathryn S McKinley, Google
Bobby Schnabel, Colorado
Moshe Vardi, Rice
Fostering Research Integrity
National Academies 2017

objectivity
honesty
openness
accountability
fairness
stewardship
Fostering Research Integrity
National Academies 2017

objectivity
honesty
openness
accountability
fairness
stewardship

bias, sexism,
gender & sexual harassment
do not fit in
Format: 2 Sections with discussion

1. Driving women out
   Climate
   Harassment

2. Bias in research evaluation
   Data on societies, conferences, and awards
   Mobilizing your community
How We Lost the Women in Computing

Moshe Y. Vardi
Rice University
Common Perception

“Women are just not interested in computing”

• James Damore, 2017: “The distribution of preferences and abilities of men and women differ in part due to biological causes and these differences may explain why we don’t see equal representation of women in tech and leadership.”

• Stuart Reges, 2018: “Men and women are different, and they make different choices. The different choices they make explain a lot of what we see in terms of lower percentages of women going into tech.”
Women in Computing - History

Reality

• Women were pervasive, even dominant, in the early days of computing.
• The social environment of computing has been and is quite hostile for women.
• Men can be quite oblivious to the existence of such a hostile environment.
• Women did not just leave, they were pushed out.
Bletchley Park - WWII

- About 8,000 women worked in Bletchley Park. Women constituted roughly 75% of the workforce there.
Code Girls, 2017

- Over 11,000 women, who comprised more than 70% of U.S. code breakers, served during WWII.
ENIAC, 1946
Women of NASA -- 1955
Cosmopolitan, 1967
“A whole new kind of work for women.”
• The British Civil Service sought to create a job category designed to deskill workers and depress wages – creating an intentional gender wage gap.

• “It is evident to common sense that women workers do not regard their career as offering an alternative career to marriage and motherhood”.

• As late as the 1980s, computer trade shows in the UK still used scantily clad young women as marketing gimmicks on their stands.
“A well-researched history of how Silicon Valley became a glorified frat house”:

- Discriminatory hiring practices
  - Documented by a recent Stanford Study
- Continual micro-aggressions and challenges that are hard to pinpoint and harder to call out
- Women’s ideas more harshly scrutinized; female engineers 35% more code rejections
- Sexual harassment and online trolling
Mark Zuckerberg and his cofounders moved from Harvard to Palo Alto, California, in March 2004. The whole enterprise began as something of a lark.

SEX, BEER, AND CODING: INSIDE FACEBOOK’S WILD EARLY DAYS

When the young Mark Zuckerberg moved to Palo Alto in 2004, he and his buddies built a corporate proto-culture that continues to influence the company today.

BY ADAM FISHER

EVERYONE WHO HAS seen The Social Network knows the story of Facebook’s founding. It was at Harvard in the spring semester of 2004. What people tend to forget, however, is that Facebook was only based in Cambridge for a few short months. Back then
Women in CS is not only a pipeline problem
% CS Degrees to Women
Yet Women Full Professors ~15%

Masters
PhD
Undergraduates

1994 2015
Sexual Harassment

• In 25 years in academia I have seen/heard of no instance of sexual harassment.

BUT

• 2018 National Academies Report: “In a survey conducted by the University of Texas System, more than a quarter of female engineering students experienced sexual harassment from faculty or staff.”

• Bottom Line: It is very easy to be oblivious!
Kathryn S McKinley, Google
Harassment in your backyard


Recent harassment in our community
Harassment is
Sexual coercion
Unwanted sexual attention
Gender harassment

promising professional rewards in return for sexual favors

threatening professional consequences unless sexual demands are met

unwanted sexual attention

rapesexual assault

unwanted groping or stroking

public consciousness

relentless pressure
Gender Harassment

- Relentless pressure for sex
- Unwanted sexual discussions
- Relentless pressure for dates
- Offensive sexual teasing
- Sexist insults (e.g., women don’t belong in science)
- Obscene gestures
- Vulgar name calling (e.g., “slut,” “bitch,” “c**t”)
- Insults to working mothers (e.g., “you can’t do this job with small kids at home”)
- Nude images posted at work
- Sexually humiliating acts
- Sexual insults (e.g., “for a good time call...”, calling someone a whore)
- Offensive remarks about bodies
- Sabotage of women’s equipment
- Gender slurs (e.g., “pu**y”)

GENDER HARASSMENT
Finding

Sexual harassment is common in academic science, engineering, and medicine
• 50% of women faculty and staff experience it (meta analysis 2003)
• 20 to 50% of students experience it from faculty & staff
• Rates of harassment are NOT decreasing
Finding and Recommendations

The legal system alone is inadequate for reducing or preventing harassment

Recommendations

• Go beyond protecting the “University/institutions”
• Address culture and climate.
• Add a code of ethics and research integrity.
• Hold PIs of Federal grants responsible.
• Professional societies have a role.
Women University Employees
Sciences, Engineering & Medicine

Adapted from Schneider, Swan, Fitzgerald 1997
Severe or frequent *gender harassment* can result in the same level of negative professional and psychological outcomes as isolated instances of sexual coercion.
Finding

Sexual harassment undermines women’s professional and education attainment and mental and physical health.

The cumulative effect is significant damage to research integrity and a costly loss of talent.
Finding

Two characteristics most associated with high rates of sexual harassment are (a) male-dominated gender ratios and leadership (b) organizational climate that communicates tolerance of sexual harassment

Organizational climate is the greatest predictor
for Institutions

• Create diverse, inclusive, respectful environments
• Diffuse hierarchical and dependent relations between trainees and faculty
• Provide support for targets
• Improve transparency and accountability
• Strive for strong and diverse leadership
• Make the entire academic community responsible for reducing and preventing harassment
In your backyard

PhD student at NIPS by famous Google researcher

Fired by Google

Princeton PhD student by Princeton advisor.

Light Penalty
Some rally to his defense
In your backyard

MIT PhD student at SIGGRAPH by famous Berkeley Professor

Under investigation

Research Excellent Assoc. Prof at PC meeting by Assist. Prof.

Not reported
Findings on reporting harassment

Estimated 11% of harassment reported
  • Retaliation
  • No consequences, no transparency
  • Reliving harassment many, many times

Legal requirements  Title IX office of offenders at US Universities, regardless of target’s affiliation. US human resource offices everywhere
for Broader Community

• Title IX reports back to funding agencies
• NSF new policy on reporting
• Geo physical society policies on ethics and sexual harassment
• ACM new policy with consequences such as losing publishing rights
• SIGARCH / SIGMICRO CARES committee
Discussion
Bias in Research Evaluation

Is CS evaluation really a meritocracy?
Bobby Schnabel,
University of Colorado, Boulder
Bias in Evaluation, Promotion and Recognition

Insight from two recent studies, and what we can do
Katherine Weisshaar: “Publish and Perish: An Assessment of Gender Gaps in Promotion to Tenure in Academia”


- Longitudinal study: tenure outcomes of ~1600 faculty, assistant profs in Computer Science, English and Sociology in 2000-2004
- Research productivity from CVs, concentrating on publications
Decomposition of Total Gender Gap

**Sociology**

- Percentage Explained
  - Remaining Unexplained Gender Effect
  - Productivity
  - Time
  - Department Context

**Computer Science**

- Percentage Explained
  - Remaining Unexplained Gender Effect
  - Productivity
  - Time
  - Department Context

**English**

- Percentage Explained
  - Remaining Unexplained Gender Effect
  - Productivity
  - Time
  - Department Context

**Blue:**
% explained by Productivity

**Purple:**
% not explained by measurable factors (“gender effect”)
Possible Explanations (Weisshaar):

- Likely not “motivated bias” (cites references)
- Likely “subtle and/or unconscious gender bias”
  - Overly scrutinizing women’s work
  - Questioning research contributions
  - Differences in recommendation levels
  - Differences in visibility and social networks
Possible Explanations (Weisshaar):

• Likely not “motivated bias” (cites references)

• Likely “subtle and/or unconscious gender bias”
  - Overly scrutinizing women’s work
  - Questioning research contributions
  - Differences in recommendation levels
  - Differences in visibility and social networks
“Raising Doubt in Letters of Recommendation for Academia: Gender Differences and Their Impact”


- 624 letters of rec’n for 174 job applicants to 8 faculty positions in psychology at single research university in U.S. south
- Applicants ~50/50 Male/Female; Letter writers ~ 70/30 M/F
- Analysis controlled for 10 academic performance variables
Analysis in Study:

- No difference by gender in performance variables

- “Doubt-raisers” per letter: 0.55 men applicants, 0.69 women

- Percentage of letters containing:

<table>
<thead>
<tr>
<th></th>
<th>Negativity</th>
<th>Hedging</th>
<th>Faint Praise</th>
<th>Irrelevancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>10%</td>
<td>15%</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>Women</td>
<td>14%</td>
<td>20%</td>
<td>30%</td>
<td>12%</td>
</tr>
</tbody>
</table>

First 3 statistically significant to outcome, first 2 most important
What we can do:

- Tenure and recommendation letters
- Networking
Bias in Awards and Honors

James Allan
Univ. of Massachusetts Amherst
Looking at society level

• Organization level
  • ACM, IEEE, AAAI, ...

• SIG-level awards (“in your backyard”)
  • SIGPLAN, SIGMOD, ...
A word about the data

Few groups keep data at this level
Some scraped by hand
  Tedious and error-prone
  Thank you to my fellow panelists
Some provided by representatives
  Thank you to Greg Byrd, Jim Crowley, Carol Hamilton, Brian Noble, John White, and probably others

Take all numbers with a grain of salt
## SIAM (major awards)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major awards</td>
<td>1970-1979</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>(not those given out by activity groups)</td>
<td>1980-1989</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>1990-1999</td>
<td></td>
<td></td>
<td>7.1%</td>
</tr>
<tr>
<td></td>
<td>2000-2009</td>
<td></td>
<td></td>
<td>14.3%</td>
</tr>
<tr>
<td></td>
<td>2010-</td>
<td></td>
<td></td>
<td>25.4%</td>
</tr>
<tr>
<td>Award</td>
<td>Men</td>
<td>Women</td>
<td>Pct women</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----</td>
<td>-------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Technical Achievement, CS</td>
<td>75</td>
<td>14</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Entrepreneur, Entrepreneurship</td>
<td>24</td>
<td>2</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Harry H. Goode, Information Processing</td>
<td>51</td>
<td>1</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>W. Wallace McDowell, CS</td>
<td>50</td>
<td>1</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Harlan D. Mills, Information Science</td>
<td>13</td>
<td>5</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Pioneer, CS</td>
<td>94</td>
<td>7</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Sidney Fernbach, High Performance Computers</td>
<td>25</td>
<td>1</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Seymour Cray, High Performance Comp Sys</td>
<td>18</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>B. Ramakrishna Rau, Microarchitecture</td>
<td>7</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Award</td>
<td>Men</td>
<td>Women</td>
<td>Pct women</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>-----</td>
<td>-------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Ken Kennedy (with ACM), HPC Prog/Prod</td>
<td>5</td>
<td>4</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Hans Karlsson, Standards</td>
<td>14</td>
<td>2</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Charles Babbage, Parallel Computing</td>
<td>26</td>
<td>1</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Eckert-Mauchly (with ACM), Computer Arch.</td>
<td>39</td>
<td>1</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Watts S. Humphrey (with SEI), Software Process</td>
<td>32</td>
<td>10</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Undergraduate teaching</td>
<td>14</td>
<td>4</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Taylor Booth (CSE education)</td>
<td>26</td>
<td>2</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>513</td>
<td>55</td>
<td><strong>10%</strong></td>
<td></td>
</tr>
</tbody>
</table>
### IEEE CS, by level

<table>
<thead>
<tr>
<th>Level</th>
<th>% women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellow</td>
<td>7.1%</td>
</tr>
<tr>
<td>Senior Member</td>
<td>7.8%</td>
</tr>
<tr>
<td>Other Member</td>
<td>7.5%</td>
</tr>
<tr>
<td>Student</td>
<td>28.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9.1%</strong></td>
</tr>
<tr>
<td>Award</td>
<td>Year(s)</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>FLAME (lifetime achievement)</td>
<td></td>
</tr>
<tr>
<td>LISA (outstanding contribution)</td>
<td></td>
</tr>
</tbody>
</table>
## AAAI awards

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellows</td>
<td>2013-2018</td>
<td>38</td>
<td>10</td>
<td>21%</td>
</tr>
<tr>
<td>Classic paper</td>
<td>2013-2018</td>
<td>10</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Distinguished service</td>
<td>2016-2017</td>
<td>2</td>
<td>1</td>
<td>33%</td>
</tr>
<tr>
<td>Feigenbaum Prize</td>
<td>2011-2017</td>
<td>3</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Engelmore award</td>
<td>2003-2018</td>
<td>14</td>
<td>1</td>
<td>7%</td>
</tr>
<tr>
<td>Senior member (self-nominated)</td>
<td>2015-2018</td>
<td>36</td>
<td>10</td>
<td>21%</td>
</tr>
</tbody>
</table>
# ACM-level awards

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Across 16 major awards</td>
<td>16 years</td>
<td>281</td>
<td>61</td>
<td>18%</td>
</tr>
<tr>
<td>Turing</td>
<td>21</td>
<td>3</td>
<td></td>
<td>13%</td>
</tr>
<tr>
<td>Research (incl. Turning)</td>
<td>198</td>
<td>39</td>
<td></td>
<td>16%</td>
</tr>
<tr>
<td>Research (w/o Athena)</td>
<td>198</td>
<td>23</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Doctoral dissertation</td>
<td>16</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Education</td>
<td>21</td>
<td>4</td>
<td></td>
<td>16%</td>
</tr>
<tr>
<td>Service</td>
<td>46</td>
<td>18</td>
<td></td>
<td>28%</td>
</tr>
<tr>
<td>Fellows</td>
<td>25 years</td>
<td>889</td>
<td>132</td>
<td>13%</td>
</tr>
<tr>
<td>2017 only</td>
<td>42</td>
<td>12</td>
<td></td>
<td>22%</td>
</tr>
</tbody>
</table>
Gender distribution in ACM SIGs
Interpret cautiously
Gender distribution in ACM SIGs

Sorted by number of members self-reported as female

Male (68%)  Unstated (20%)  Female (12%)
Gender distribution in ACM SIGs

Percent female (bars) and count female (dots)

Avg (13%)
Gender distribution in ACM SIGs

Avg (13%)
## SIGPLAN (programming languages)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL Achievement</td>
<td>1997-2017</td>
<td>21</td>
<td>6 (3 joint)</td>
<td>30%</td>
</tr>
<tr>
<td>Milner Young Researcher</td>
<td>2012-2017</td>
<td>5</td>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td>Reynolds Dissertation</td>
<td>2001-2017</td>
<td>19</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Service</td>
<td>1996-2016</td>
<td>15</td>
<td>7</td>
<td>32%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>17</td>
<td>22%</td>
</tr>
<tr>
<td>Total research</td>
<td></td>
<td>45</td>
<td>10</td>
<td>18%</td>
</tr>
</tbody>
</table>
# SIGOPS (operating systems)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Weiser (innovation)</td>
<td>2001-2017</td>
<td>17</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>Ritchie (dissertation)</td>
<td>2013-2017</td>
<td>4</td>
<td>1</td>
<td>20%</td>
</tr>
</tbody>
</table>

# SIGACT (theory)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knuth (contributions)</td>
<td>1996-2017</td>
<td>16</td>
<td>1</td>
<td>6%</td>
</tr>
<tr>
<td>Award</td>
<td>Year(s)</td>
<td>Men</td>
<td>Women</td>
<td>Pct women</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------</td>
<td>-----</td>
<td>-------</td>
<td>-----------</td>
</tr>
<tr>
<td>Codd Innovations award</td>
<td>1992-2018</td>
<td>24</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>Jim Gray Dissertation award</td>
<td>2006-2018</td>
<td>13</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
### SIGIR (information retrieval)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salton (lifetime achievement)</td>
<td>Triennial</td>
<td>10</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>Test of time</td>
<td>Since 1980</td>
<td>23</td>
<td>17</td>
<td>42%</td>
</tr>
<tr>
<td>Female lead/sole author</td>
<td></td>
<td>33</td>
<td>7</td>
<td>18%</td>
</tr>
<tr>
<td>Best paper awards</td>
<td>Since 1996</td>
<td>18</td>
<td>5</td>
<td>22%</td>
</tr>
<tr>
<td>Female lead/sole author</td>
<td></td>
<td>22</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

### SIGDOCC (design of communication)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigo award (lifetime contribution)</td>
<td>1998-2018</td>
<td>15</td>
<td>12</td>
<td>44%</td>
</tr>
</tbody>
</table>
### SIGCHI (human-computer interaction)

<table>
<thead>
<tr>
<th>Award</th>
<th>Year(s)</th>
<th>Men</th>
<th>Women</th>
<th>Pct women</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHI Academy</td>
<td>2001-2005</td>
<td>26</td>
<td>5</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>2006-2010</td>
<td>24</td>
<td>8</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>2011-2015</td>
<td>26</td>
<td>12</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>2016-2018</td>
<td>11</td>
<td>13</td>
<td>54%</td>
</tr>
</tbody>
</table>
Summary of those tables

- ~20% of PhDs go to women (~18 years)
- Around 15% of awards go to women
  - Varies widely
- Is that OK?
What can you do as chair/head?

• Most awards drawn from nominees
  • Nominate women
    • Awards Committee?
  • (Check language used in nominations!)
• Many awards require membership
  • Encourage joining ACM, IEEE, …
• And now... more ideas
What’s in Your Backyard? What Can You Do About It?
Experiences from the Architecture Community

Sarita Adve
University of Illinois

Core collaborators:
Kim Hazelwood, Natalie Enright Jerger, Margaret Martonosi, Kathryn McKinley
Plus SIGARCH EC and Many Supporters
In the last year, my community shone a light in its backyard. We found some dark corners not because we are worse, but because we looked. And now we can fix.

Takeaways: Please look in your own backyard. There is a lot we can do to fix what’s broken.
Architecture Community

- Architecture community =
  - ACM SIGARCH, ACM SIGMICRO, IEEE TCCA, IEEE TCuarch

- Four main conferences
  - ISCA → SIGARCH + TCCA
  - Micro → SIGMICRO + TCuarch
  - HPCA → TCCA
  - ASPLOS → SIGARCH + SIGPLAN + SIGOPS
Key Events Last Year in Architecture Community

Study shows poor gender ratios
• Keynotes, PC chairs, Awards
• All conferences must improve
• Micro stands out

Micro50: Legends of Micro panel
• All white, all male

Reading of Diversity Statement
• Call to action
• Clear public support for change

DIGARCH works for diversity
But study is wakeup call

Diversity in conference governance
• Institution, academic lineage, …
Key Events Last Year in Architecture Community

- SIGARCH CARES to Report on Discrimination and Harassment
- Study shows poor gender ratios in keynotes, PC chairs, Awards
- All conferences must improve; Micro stands out
- SIGMICRO and SIGARCH Join Hands on CARES
- WICArch is SIGARCH subcommittee
- Web portal w/ searchable directory
- Strategize diversity efforts
- CRA-W + CRA as a template
What’s in your backyard?
What can you do?
Some Lessons from the Architecture Community

- Data speaks louder than vague perceptions, but HARD to get -- GET DATA!
- SIGARCH Blog: A digital meeting space for the community
- It takes a village to make change: many and diverse supporters
- Sometimes it takes a public statement
- Sometimes it takes personal stories
- Change in large organizations is hard, but small steps matter
- Much work remains but impact already visible
  - Hallway discussions at conferences, panels, bias busting workshop, keynotes, bylaws, …
  - CARES, WICArch
  - Micro instituting new policies
  - Broader engagement: ACM, CRA, NSF, this session, …

Yes, we can make a difference
I thought we (SIGARCH) were doing a lot
  - Careful policies for program chairs, steering committees (for flagship conferences)
  - Strong oversight of flagship events
  - Many programs to increase diversity
    - Pioneered travel grants for childcare, people with disabilities
    - Adjusted eligibility criteria for awards to consider family related leaves
    - Support for CRA-W grad cohort
    - WICArch: Women in Computer Architecture

But still much room for improvement
  - Women: No recent ISCA keynotes, only one career award, few PC chairs
  - Anecdotal reports of harassment

More work needed

Need a strong foundation of institutional policies
Institutional Policies

Research Society Leaders
- Conference governance, awards, honors - Bylaws for processes
- Code of conduct, reporting violations, enforcing sanctions - CARES
- Awareness, training - Bias busting workshop at ISCA’18
- DATA - ACM will now collect demographic data at registration and membership

Funding Agencies
- NSF’s new harassment related policies

Department Chairs, Universities
- Awareness and training
- Awards, honors, compensation processes
- Recognition of efforts to improve diversity - this is hard work!

Individuals: Acknowledge biases, watch out for your own and for others

What’s left to do?
A LOT!
What’s in your backyard?
Get data first!

What can you do about it?
A LOT!
Discussion
Resources

• Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine (2018), National Academies

• Gender Diversity in Computer Architecture, Natalie Enright Jerger and Kim Hazelwood

• What Happens to Us Does Not Happen to Most of You, Kathryn S. McKinley

• Statistics, we have a problem, Kristian Lum

• A member of the Theory Community Speaks out, #Metoo, Anonymous post

• Software engineer recalls impact of alleged sex assault from UC Berkeley professor James O’Brien, Anjali Shrivastava

• How we Lost the Women in Computing, Moshe Vardi

• Sexual Harassment Explains a Lot About Why Women Get Paid Less, Rebecca Greenfield and Laura Colby

• Summary and Thoughts on the Diversity Conversations in the Architecture Community
% CS/CE Women Faculty - Taulbee

Assistant
Tenure track hires
Associate
Full

1995 2017