

One individual can make a difference

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I come from the high-performance computing side of the Computer Science discipline, which is decidedly non-diverse. I didn't always realize it, though. Some stark contrasts at each step of my career highlighted these disparities and opened my eyes.

This is also demonstrated by the data. The [Taulbee Survey](#) is a longstanding, ongoing survey of over 200 computer science, computer engineering, and information science departments in the United States and Canada. Now in its 45th year, the survey, sponsored by the Computing Research Association, tracks trends in university enrollments and graduation rates at the B.S., M.S., and Ph.D. levels, employment of new Ph.D.'s, and faculty demographics in these fields.

The results are stark -- only 19% of Ph.D.'s awarded in these fields by these universities were awarded to women, and 1.5% went to African-Americans in 2014. Of the 1940 degrees awarded, only 3 went to American-Indian/Alaska-Native and 19 to Hispanic people. And sadly, this is an improvement over past years!

Fortunately, early in my career I was surrounded by a positive and diverse group of individuals. My PhD advisor's students were majority female; I had a number of African-American and Hispanic colleagues in grad school as well. Sure, many of us had the same fellowship support aimed at underrepresented groups, but somehow it didn't really click in my mind just how depressingly underrepresented we all were overall.

My workplace after I graduated followed the reality of those earlier survey numbers -- as a postdoc, I was the only woman in my group and the only source of diversity was nationality. It was at this point that I realized the depth of the problem and resolved to tackle it head on.

I cheerfully represented my organization at job fairs and K-12 outreach; I attended diversity conferences such as the Richard Tapia Celebration of Diversity in Computing and participated in the diversity effort in my subject-area conference, Supercomputing; and I hosted as many summer students of diverse backgrounds as possible. But I knew it was not enough. I could see that the efforts of one, young, locally influential person, no matter how superhuman, was not resulting in the change that I sought. The environment had to be changed, and this change had to be propagated down from the top of the organization. And unfortunately, I did not see this happening where I was working.

Several years and organizations later, I now work at Berkeley Lab, and Diversity and Inclusion is so important that we even have a council on the topic. I appreciate the efforts coming from the top. Our diversity numbers certainly don't reflect the general population of our sponsors, the U.S. taxpayers, though, which is still problematic. It would be useful to know how to redirect our efforts to build recruitment and retention, since we are on our way but not quite there.

It was through my work on the Berkeley Lab Diversity and Inclusion Council that I came across an announcement for the Expanding Potential Workshop put on by Synberc. The workshop promised solutions, which was great! So I attended, to see what I could come up with that might apply back here at Berkeley Lab.

The keynote presentations and lightning talks were inspirational; the posters and workshops were informative; the discussions were invaluable. In the end, I realized that while I lacked the authority to do anything across the entirety of Berkeley Lab, I could still wield some influence within my division, especially since I'd recently been named the acting leader of my group.

I came back to work emboldened to use the little bit of power I had recently acquired to influence my division. In a group leader meeting, I gave a report of the workshop, and included some actions that we could take, which were inspired by the workshop. I was anxious about talking about this, because in my past experience elsewhere, discussions about diversity often led to eye rolling at best or outright hostility at worst, but I was pleasantly surprised at how supportive and attentive everyone was. This reflected the sentiment at the workshop that each individual can make a difference, and that as we move through our careers and reach higher positions, our influence can come from the top as I had hoped earlier in my career.

The ideas inspired by the workshop included creating a monetarily large award for work related to improving diversity, to be announced division-wide ahead of time so everyone understands the importance and prestige of the award as well as how to win it; integrating diversity into our strategic plan; partnering with HBCUs/MSIs to recruit diverse students; and making sure that all student interns have a positive experience. The latter was sparked by my learning at the conference that bad internship experiences are a huge turnoff to students from underrepresented groups. My division director agreed to adopt all four of the suggested action items, with the understanding that we would have to figure out how best to partner with the universities.

So I feel good about the prospects for diversity, at least within my little corner of the high-performance computing world. We can blaze the trail to show others that it can be done.