

# My Work on Diversity, Equity and Inclusion (DEI)

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**Early Exposure:** Having grown up as a Tamil in Sri-Lanka for the first 20 years of my life, I understand first-hand the tragedy that can result from racial discrimination and racial violence. And, one of the most memorable moments of my life was to visit the jail cell of Nelsen Mandala in 1999, when I visited Robben Island during a trip to Cape Town for a computing conference. Perhaps my early recollections of Diversity go back to the days with the Irish nuns in Sri-Lanka. I played the melodica and later piano accordion in the school band while a pre-teen and a teenager and they used to take us to the Home for the Aged, Home for the Severely Disabled and the well-known Mental Hospital (Angoda) in Sri-Lanka to play music for the residents. It was heart wrenching but exposed me to people who were different from me.

**Initial work at Honeywell:** I have been involved with Diversity efforts since early on in my career. My early work on Diversity was at Honeywell in 1987-1988 when I was part of the Diversity committee at Honeywell's Corporate Systems Development Division. This effort was headed by the Vice President of the division. We discussed ways of hiring more women and from the African American community, retaining and promoting them (at that time we did not discuss working with Hispanic American, Native American and LGBTQ communities). This gave me early exposure to gender and racial inequity that existed back in the 1980s in the US.

**Work at MITRE:** I joined MITRE in January 1989 and for the first six years I focused on establishing my research and development efforts. While the technical staff at MITRE were mostly men, I included a female member of technical staff in most of my projects. Research papers were published in conferences and journals with these team members. I was promoted to a Department head in 1995 and that is when I focused my efforts on gender and racial diversity. I grew my department from 8 to around 28 staff. While most members were Caucasian male, I hired an African American male research scientist as well as three women scientists as members of the technical staff (some were internal transfer). It was not until 1999 that I started giving talks to female groups and got more active in DEI. My first such talk was to WITI (Women in Technology International) conference in Cary, North Carolina in September 1999. After that I started giving talks to girls at Smith College in 2000 motivating them to pursue a career in Computer Science as well as at the women's network at MITRE (2003).

**Work at NSF:** While I was on IPA at NSF from MITRE, I worked with the team on the initial Women in Cyber Security initiative (from SUNY Buffalo) and participated in the inaugural panel organized as part of the Secure Knowledge Management (SKM) workshop. I have continued to participate in Women in Cyber Security panels associated with SKM in subsequent years (e.g., 2008, 2021). In addition, I gave talks at universities in EPSCoR states (e.g., Arkansas, Oklahoma and Louisiana) at multiple conferences to promote CISE (Computer and Information Science and Engineering) activities. I also participated in panels at CRA-W workshops (e.g., early career workshops) while I was at NSF. In addition, I gave a featured address at the Society for Women Engineers conference held in Baltimore in March 2004.

**Work with students at UT Dallas:** I joined the University of Texas at Dallas in October 2004 and I actively started recruiting students from the female and minority communities. Over the past 16 years I have graduated 18 PhD students out of which 8 are women and three from the African American, Hispanic American and the LGBTQ communities. At present I have five PhD students of whom 4 are women. I have also hired postdocs from the female and African-American communities into my team. I have advised multiple female MS students giving them RAs during the early years at the university (the thesis option is pursued less by students now at the MS level). I have also actively recruited students from the female, African American, Hispanic American and from the LGBTQ communities for our NSF SFS (Scholarship for Service) Program. I gave the inaugural Grace series lecture at the university in April 2015 and also kicked off the series for 2020-2021 in September 2020. I give talks to local high school students (mostly female – e.g., Girls who code at Plano, Allen and Frisco school districts) and also mentor undergraduate female students. I have also given talks to local women's groups including at the Society of Women Engineers Dallas chapter and at DFW ATW (Association for Technology Women). Finally, I am part of the faculty mentors who attend Grace Hopper conference together with our students and I have also served on the university's mentoring committee and have participated in multiple panels.

**Women in Cyber Security:** It was not until Fall 2014, after celebrating the 10<sup>th</sup> anniversary of the Cyber Security Institute that I founded back in 2004, that I started working tirelessly to promote women and minority communities in cyber security data science, and Services computing/cloud. I co-chaired the 800 person Women in Cyber Security (WiCyS) conference in 2016. This was followed by numerous outreach keynote and featured talks at various conferences for women (as discussed under outreach keynote addresses in an Appendix). This includes cofounding and cochairing the Women in Data Science and Engineering workshop associated with IEEE ICDE in 2017 and co-founding the Women in Services Computing at the IEEE Services Congress and cochairing it in 2017 and 2018). I was also a distinguished speaker for CRA-W in 2015. I co-founded the Women in Cyber Security Center at UT Dallas in 2016 and co-direct it. And, I really enjoyed reviewing the cyber security scholarship applications from female students for CRA-W and ACSAC from annually from 2015-2020 (SWSIS). In addition, I continue to give keynote addresses at events such as Women in Cyber Security Research and Women in Communications Engineering conferences/workshops. In addition to my talks at events such as Girls who code, I also give talks to the general public in cyber security (e.g., at public libraries) and chaired a panel at NIST/NICE on Engaging Rural America in Cyber Security (2018). I am planning to do more with respect to the latter initiative including with Native Americans. In addition to the above, I am looking into giving talks to developing countries in technology, especially to female communities. I am giving a keynote address at a IEEE conference in Bangladesh in December 2020 and am discussing with a university in Saudi Arabia to give a guest lecture (free of charge) to their female students who have to be taught by female professors.

**Women in Data Science:** One of the high impact events I participated in was at the Women in Data Science (WiDS) conference at Stanford University in 2018 where I gave a featured address, participated in a panel as well as gave a media interview. This event was watched by over 100,000 people around the globe (according to Forbes Magazine). Subsequently I established the Women in Data Science Center at UT Dallas and have an annual Women in Data Science day coinciding with Stanford University's WiDS. I also chaired the WiDS workshop associated with IEEE ICDE (we merged WIDSE with WiDS).

**From Gender to Race:** While much of my work until 2019 was on gender equality, more recently I have focused on Diversity, Equity and Inclusion. I organized a panel at IEEE ISI 2020 on this topic and also gave the opening address at the iMentor workshop at ACM CCS conference in 2020. I am now studying the various articles on DEI so that I have a better understanding about the issues and challenges so that I can contribute not only to gender diversity but also all aspects of diversity including racial diversity. I am planning to attend for example various conferences for minority communities so that I can recruit students, faculty and contribute more to DEI. I am grateful to Career Communications Inc. for giving me the Women of Color Research Leadership Award in 2001 and to the Dallas Business Journal for giving me the Women in Technology Award in 2017 for my work.

**Violence against Women and Children:** One particular area I am focusing on and that I feel strongly about is violence against women and children. At every talk I give to women I make it a point to stress that a *High Paying Job is a MUST for Every Woman* so that she does not have to stay with an abusive partner. Children are helpless and far more vulnerable. Since 1999 I have supported various organizations such as Save the Children, UNICEF and Dallas Advocacy for Children. My current work in AI also focuses on this aspect and I have given talks on "Can AI be for Good in the Midst of Cyber Attacks and Privacy Violations" and use violence against children as an example application.

**It's not just the Talk it's the Walk:** These days almost everyone claims that they support DEI. However, I have not just talked about DEI. I have actively worked in DEI starting early on in my career at Honeywell and continued at MITRE, NSF and UT Dallas. Over the past 5 years I have given around 20 keynote/featured talks and chaired around 15 panels and multiple workshops at diversity related events. More recently I also read on DEI and use the information not just in practice but also in the research on Fairness and Bias in AI. In summary, as the authors (Tia Brown McNair et al) of the book "*From Equity Talk to Equity Walk*" have stated, one must not just talk about diversity; one must show by action. Over the years I have shown by action (Equity Walk) how I have constructively contributed to DEI. However, I believe that what I have done so far is just a drop in the ocean. I still have a long way to go and that is what I am planning to do for the next several years.