

# Inclusivity and Diversity Resources

## INITIATIVES/SCHOLARSHIP/FELLOWSHIP/FINANCIAL SUPPORT OPPORTUNITIES

### Association for Computing Machinery (ACM) Special Interest Group on High Performance Computing (SIGHPC)

SIGHPC is the first international group within a major professional society that is devoted exclusively to the needs of students, faculty, researchers, and practitioners in high performance computing. SIGHPC's mission is to help spread the use of HPC, help raise the standards of the profession, and help ensure a rich and rewarding career for people involved in the field.

SIGHPC believes that HPC can only reach its full potential through the efforts of people from all backgrounds, organizations, and disciplines. They provide resources and fellowships/award opportunities for students in HPC-related studies, such as the ones below. To learn more about SIGHPC, [click here](#).

#### Computational & Data Science Fellowships

Association for Computing Machinery (ACM) Special Interest Group on High Performance Computing (SIGHPC) and Intel have partnered to create Computational and Data Science Fellowships, a 5-year program to increase the diversity of students pursuing graduate degrees in data science and computational science. Specifically targeted at women or students from racial/ethnic backgrounds that have not traditionally participated in the computing field, the program is open to students pursuing degrees at institutions anywhere in the world. The fellowship began in 2016. Each year, nominations open in March and close at the end of April. Winners are announced in July. For more information, [click here](#).

#### Computing4Change

A competition for students from diverse disciplines and backgrounds who want to work collaboratively. It is for undergraduate students who want not just to enhance their skillset, but also create positive change in their community. For more information, [click here](#).

#### Emerging Woman Leader in Technical Computing (EWLTC) Award

The ACM SIGHPC Emerging Woman Leader in Technical Computing is a biennial award open to any woman who has engaged in HPC and technical computing research, education, and/or practice for 5-15 years since receiving her highest degree. This international award creates a new career milestone achievement, and also establishes a cohort of role models for students and professionals who are just getting started in our field. The awardee is recognized with a \$2,000 cash prize, a plaque, and travel support to SC. For more information, [click here](#).

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#### Butler Center Travel Award for Graduate Students

The Susan Bulkeley Butler Center for Leadership Excellence supports women's success and leadership. The travel award encourages and enables networking and academic collaboration. It is intended to support a graduate student who will be presenting a paper as an author or co-author at a national or international conference. This award is made possible through a partial gift fund from the "Varma Family" and matching contribution from the Butler Center. Each award provides \$500 to cover travel expenses for graduate students. For more information, [click here](#).

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#### Case Western Reserve University Women in Tech Initiative

The Women in Tech Initiative launched in April 2019 and fosters learning and growth in the fields of technology through mentorship and professional learning opportunities. Their goals include:

- Provide academic, social and professional opportunities for women in Electrical Engineering and Computer Science (EECS) to succeed while also building community and togetherness in the field.
- Transform the environment of EECS to be more inclusive and empowering for women.
- Increase the number of female faculty and enrolled students in EECS.
- Identify mentors and role models that will enable women to envision themselves as leaders in technology.
- Encourage alumnae engagement through networking events and presentations to further create opportunities and build bridges for our students into the community.

To learn more about this new initiative and how to get involved, [click here](#).

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#### M3 Challenge

MathWorks Math Modeling (M3) Challenge is a contest for high school juniors and seniors. Through participation, students experience what it's like to work as a team to tackle a real-world problem under time and resource constraints, akin to those faced by professional mathematicians working industry. The Challenge awards \$100,000. To learn more, [visit the website here](#).

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## Scholarships for Women Studying Information Security (SWSIS)

Since 2011, Applied Computer Security Associates, sponsor of the ACSAC and NSPW conferences, has offered scholarships for women in security-related undergraduate and masters' degree programs through the Scholarships for Women Studying Information Security (SWSIS, [www.swsis.org](http://www.swsis.org)). Thanks to a \$250,000 4-year contribution by Hewlett-Packard company in early 2014, ACSA expanded our program to award 11 scholarships for the 2014-15 academic year. The Committee on the Status of Women in Computing Research (CRA-W), an arm of the Computing Research Alliance, led selection of scholarship winners. Information about the 11 SWSIS Scholars (scholarship winners) is available at [www.swsis.org](http://www.swsis.org). ACSA, CRA-W, and HP are pleased to announce that applications for 2015-16 scholarships are open Dec 15 2014 - Feb 15 2015. To apply, an applicant must provide: \* An essay describing her interest and background in the information security field. \* A current transcript. \* A resume or CV. \* At least two letters of reference (typically from faculty members). \* Her university name and class status. The scholarship is renewable for a second year subject to availability of funds, given proof of satisfactory academic progress. Preference is for US citizens or permanent residents; funds are available for use at any US campus of a US university. More information at [www.swsis.org](http://www.swsis.org) or [swsis@swsis.org](mailto:swsis@swsis.org) Jeremy Epstein, Director, Scholarship Programs Applied Computer Security Associates, Inc. Rebecca Wright, CRA-W Director for SWSIS Computing Research Association Committee on the Status of Women in Computing Research

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## Women Techmakers

Women Techmakers kicked off in 2012 as a once-per-year event at I/O by then VP of Google[x] Megan Smith. Women Techmakers is now led by Head of Global Programs, Natalie Villalobos and a global team of Googlers who are passionate about empowering women in technology. From 2014 to present, Women Techmakers is continually launching global scalable initiatives and piloting new programs to support and empower women in the industry. Their programs provide visibility, community, and resources for women in technology globally.

Through the Women Techmakers Scholars Program - formerly the Google Anita Borg Memorial Scholarship Program - Google is furthering Dr. Anita Borg's vision of creating gender equality in the field of computer science by encouraging women to excel in computing and technology and become active leaders and role models in the field. To learn more about Women Techmakers, their events and scholars programs, and become a member, [click here](#).

## Google - Inspiring the next generation of tech innovators

We want to inspire young people around the world not just to use technology, but to create it.

Visit Google's Diversity website for ideas on scholarships, internships, and longer term investments in CS: Education, Research, and Advocacy.

## Women Who Choose Computer Science - What Really Matters

The critical role of exposure and encouragement

Abstract: Google believes that a diverse workforce leads to better products for diverse users, and is especially committed to reversing the negative trends around women in Computer Science. To guide the company's outreach and investments in this space, Google conducted a study to identify and understand the factors that influence young women's decisions to pursue degrees in Computer Science. It identified encouragement and exposure as the leading factors influencing this critical choice and learned that anyone can help increase female participation in Computer Science, regardless of their technical abilities or background. [Women Who Choose CS - What Really Matters.pdf](#) Click here to view on the Web.

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## ORGANIZATIONS FOCUSED ON DIVERSITY AND INCLUSIVITY IN TECH WITH HELPFUL RESOURCES

### AnitaB.org

At [AnitaB.org](http://AnitaB.org), they envision a future where the people who imagine and build technology mirror the people and societies for whom they build it. They connect, inspire, and guide women in computing, and organizations that view technology innovation as a strategic imperative.

Their social enterprise supports women in technical fields, as well as the organizations that employ them and the academic institutions training the next generation. A full roster of programs help women grow, learn, and develop their highest potential. For information, [click here](#).

### Grace Hopper Celebration Award

The Grace Hopper award provides a once in a lifetime chance to allow academics to connect with other women in computing, hear stories from peers and experts in computing, and get quality career advice specific to their needs. For more information, [click here](#).

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## EQUALS Global Partnership

EQUALS is a ground-breaking global network delivered by a committed partnership of international organizations, governments, and private sector companies around the world working together to bridge the digital gender divide – by bringing women to tech, and tech to women – and in so doing, bettering the lives of millions worldwide.

### How does EQUALS work?

By promoting awareness, building political commitment, leveraging resources and knowledge, harnessing the capacities of partners, and supporting real action – EQUALS seeks to achieve digital gender equality and through this, to improve the livelihoods of millions around the world.

EQUALS was founded in 2016 by five partners: the International Telecommunications Union, UN Women, the International Trade Centre, GSMA and the United Nations University.

Today, EQUALS is a growing global network of more than 50 partners – including governments, companies and NGOs.

#### **Why do we need digital gender equality?**

Around the globe in developing or developed countries, women are being held back from participating in the financial, educational, social and health resources of the digital technology-driven world – both in terms of benefiting from these and contributing to these. The digital gender divide is one of the largest gender divides in our world today – while its negative impact is substantial and felt by all.

In families, communities and professional roles, women's perspectives, skills and experiences bring important value – strengthening societies, building economies, advancing knowledge and ultimately improving livelihoods.

It is clear that without women's participation in digital technology development and access to digital technology resources – we all lose.

#### **Their Focus**

EQUALS works to reverse the increasing digital gender divide, and to close the gap by 2030 – supporting UN Sustainable Development Goal 5 by empowering women through their use of information and communication technologies. An action plan of data gathering, knowledge sharing and advocacy strengthening drives the EQUALS network partnership.

For more information about their program and additional resources, [click here](#).

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## **National Center for Women & Information Technology (NCWIT)**

NCWIT is a non-profit community that convenes, equips, and unites change leader organizations to increase the meaningful participation of all women - at the intersections of race, ethnicity, class, age, sexual orientation, and disability status - in the influential field of computing, particularly in terms of innovation and development.

Before NCWIT was chartered in 2004 by the National Science Foundation, programs focusing on women and computing existed mostly in isolation - without the benefit of shared best practices, effective resources, communication with others, or national reach. Today, these programs are part of the NCWIT community, creating a far greater impact than if institutions acted alone. Visit their website here, <https://www.ncwit.org/>

## **Unconscious Bias and Why It Matters for Women in Tech**

Unconscious bias is an important concept to understand because the barriers encountered by women in tech aren't always overt. Learning to identify hidden roadblocks will help you hire and retain technical women. NCWIT's first interactive video resource, "[Unconscious Bias and Why It Matters for Women in Tech](#)," is a useful tool to get you started on this subject.

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## **SciGirls Connect**

The SciGirls brand has grown into a far-reaching transmedia enterprise, serving girls, families and educators in both English and Spanish. Evidence-based practices in STEM education for girls, SciGirls' videos, online resources, hands-on activities and professional development work together to address a singular but powerful goal: to inspire, enable, and maximize STEM learning and participation for all girls, encouraging greater interest in STEM careers.

Outreach Partnerships: Partnerships with nationally recognized STEM and girl-serving organizations such as the National Girls Collaborative Project, Society of Women Engineers (SWE), National 4-H Council and American Association of University Women (AAUW) have helped us amplify our reach and impact.

SciGirls Government Connections: SciGirls is participating in several government-driven initiatives, including a Girls in STEM Collaboration at the White House as part of the Educate to Innovate campaign.

Learn more about SciGirls: <http://scigirlsconnect.org/>

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## **Women in CyberSecurity**

Women in CyberSecurity (WiCyS) is the premier organization with national reach dedicated to bringing together women in cybersecurity from academia, research and industry to share knowledge, experience, networking and mentoring. This organization was founded in 2012 by Dr. Ambareen Siraj of Tennessee Tech University through a National Science Foundation (NSF) grant. To learn more about WiCyS, including how to become a member, donor or sponsor, [click here](#).

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## **Women Inspiring Leaders**

Women Inspiring Leaders (WIL) exists to work with women to: accelerate the path of success; create a better future for women of tomorrow; promote diversity and inclusion; unlock the "how" for those seeking to advance; and build the right network. Their mission is advancing women through meaningful connections, lifetime learning and driving progress to accelerate women's path to leadership. To learn more about their purpose, access their resources, and view upcoming events, [click here](#).

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# EDUCATIONAL PROGRAMS, CAREER DEVELOPMENT AND MENTORING OPPORTUNITIES

## Argonne Training Program on Extreme-Scale Computing

The Argonne Training Program on Extreme-Scale (ATPESC) provides intensive, two-week training on the key skills, approaches, and tools to design, implement, and execute computational science and engineering applications on current high-end computing systems and the leadership-class computing systems of the future.

The core of the program will focus on programming methodologies that are effective across a variety of supercomputers and that are expected to be applicable to exascale systems. Additional topics to be covered include computer architectures, mathematical models and numerical algorithms, approaches to building community codes for HPC systems, and methodologies and tools relevant for Big Data applications. For more information about the program, [click here](#).

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## Campus Champions Program

The Campus Champions Program is a group of 400+ Campus Champions at 200+ US colleges, universities, and other research-focused institutions, whose role is to help researchers at their institutions to use research computing, especially (but not exclusively) large scale and high end computing.

Campus Champions peer-mentor each other, to learn to be more effective. The Campus Champion community has a very active mailing list where Champions exchange ideas and help each other solve problems, regular conference calls where we learn what's going on both within the Champions and at the national level, and a variety of other activities.

A Campus Champion is an employee of, or affiliated with, a college or university (or other institution engaged in research), whose role includes helping their institution's researcher's, educators and scholars (faculty, postdocs, graduate students, undergraduates, and professionals) with their computing-intensive and data-intensive research, education, scholarship and/or creative activity, including but not limited to helping them to use advanced digital capabilities to improve, grow and/or accelerate these achievements. To learn more, [click here](#).

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## College Loops | Girls Who Code

Girls Who Code College Loops are university-level networks for college-aged women interested in tech to support one another and help each other persist and succeed in the field. College Loops build belonging and community through weekly meetings during the school year. Requirements: must be 18+ years old, currently enrolled in a US-based college or university, and female-identifying individual. There are over 2,740 College Loop programs in the U.S. To find a location near you, [click here](#).

They also have a Clubs Program, which is for girls in 3rd-12th grade. The Clubs Program is an after school club for girls to explore coding in a fun and friendly environment. Additionally, there are Summer Immersion 2-week virtual programs for rising 10th-12th grade girls to learn coding and get exposure to tech jobs. To learn more about these programs, [click here](#).

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## NJEdge Women Leaders in Technology: A Professional Network

Women Leaders in Technology, established by NJEdge in 2018 to advance the information technology profession for women, officially launched in January 2019. Digital transformation in higher education is the primary focus of the Professional Network with guidance from an impressive roster of esteemed Executive Sponsors.

New Jersey maintains a rich tradition of opportunities for women executives and leaders in technology departments, divisions, and organizations. Through the Network, group members have an opportunity to:

- Meet, connect and share experiences
- Give advice and provide mentoring
- Discuss the unique challenges of succeeding as a female leader in a technology leadership role

For more information about this Network, [click here](#).

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## PEARC Conferences

The PEARC organization coordinates the PEARC conference series in order to provide a forum for discussing challenges, opportunities, and solutions among the broad range of participants in the research computing community. This community driven effort builds on successes of the past, and aims to grow and be more inclusive by involving additional local, regional, national, and international cyberinfrastructure and research computing partners spanning academia, government and industry. The PEARC conference series is working to integrate and meet the collective interests of our growing community. For more information, [click here](#).

PEARC offers a dynamic student program designed to bring together a broad and diverse group of researchers, students, and prospective users including significant participation from under-represented groups and new disciplines. The student program provides students with a range of opportunities to participate in both student activities and the full technical program so that they may share their research efforts and gain insights and inspiration from like-minded individuals at the conference. For more information, [click here](#).

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## University of Colorado Boulder Applied Computer Science BS Degree Program

The post-baccalaureate degree in Applied Computer Science is for professionals with a prior bachelor's degree who are looking to make a career pivot. The goal is to prepare students with diverse academic backgrounds to enter the computer science field.

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## University of Illinois Professional Master of Computer Science (MCS) Program

The Master of Computer Science (MCS) from Illinois Computer Science is a professional degree program that allows you to augment your education and accelerate your career by learning from world-class faculty who are advancing the frontiers of computer science. As an MCS student, you must complete 32 hours of graduate coursework, but you are not required to work with an advisor to write a thesis or dissertation.

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## Virginia Tech Online Master of Information Technology

Earn your Master of Information Technology or graduate certificate from a top-ranked program designed for working professionals, 100% online. As of 2019, their online graduate program is ranked #3 nationwide.

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## Virginia Tech Women's Leadership & Mentoring Program

In collaboration with senior administrators and faculty at Virginia Tech, the Women's Center is delighted to sponsor the VT Women's Leadership and Mentoring Program (WLMP). The year 2019 marks the 11th year of this program. The program provides a cohort-based experience for post-masters professionals in a series of sessions on topics related to professional development. The WLMP is specifically designed for women who are aspiring higher education administrators and wish to gain leadership knowledge and experience.

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## Women in IT Networking at SC (WINS) program

The Women in IT Networking at SC program is a three year program funded by the National Science Foundation and DOE/ESnet. It was developed as a means for addressing the prevalent gender gap that exists in Information Technology (IT) particularly in the fields of network engineering and high performance computing (HPC). It was originally introduced as a pilot program in November 2015 at the SC15 conference in Austin, Texas. The program enables five talented early to mid-career women from diverse regions of the U.S. research and education community IT field to participate in the ground-up construction of SCinet, one of the fastest and most advanced computer networks in the world. WINS is a joint effort between the Energy Sciences Network (ESnet), the Keystone Initiative for Network Based Education and Research (KINBER), and University Corporation for Atmospheric Research (UCAR).

<http://women-in-networking.net/>

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## XSEDE EMPOWER

An XSEDE-wide effort is underway to expand the community by recruiting and enabling a diverse group of students who have the skills - or are interested in acquiring the skills - to participate in the actual work of XSEDE. The name of this effort is XSEDE EMPOWER (Expert Mentoring Producing Opportunities for Work, Education, and Research).

To participate, undergraduate students from any US degree-granting institutions are matched with a mentor who has a project that contributes to the work of XSEDE. Participation is strongly encouraged for mentors and students belonging to groups traditionally underrepresented in HPC, including, but not limited to, women, minorities, and persons with disabilities. There are three tiers of participation for students depending on existing skill level: learner, apprentice, and intern. For more information, [click here](#).

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## RECRUITING AND RETENTION RESOURCES

### FIRST - For Inspiration and Recognition of Science and Technology

Our mission is to show students of every age that science, technology, and problem-solving are not only fun and rewarding, but are proven paths to successful careers and a bright future for us all. Founder Dean Kamen invites you to get behind FIRST, too. University participation can include scholarships, sponsorship of competitions, and additional participation. [Read more about the FIRST Vision and Mission](#)

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## FORWARD - Focus on Resources for Women's Advancement, Recruitment/Retention, and Development

North Dakota State University (NDSU) FORWARD began as a self-initiated group of NDSU faculty, staff, and administrators interested in submitting a National Science Foundation (NSF) ADVANCE grant proposal. Very soon, however, the group realized that, while they were developing the ADVANCE proposal, they could also initiate and encourage some institutional changes that would benefit and advance women faculty.

FORWARD, now with the participation from each NDSU's academic colleges, is committed to these specific goals:

- Improve the climate across the campus and narrow the gap between men's and women's perceptions of the campus climate;
- Employ targeted recruiting strategies to recruit women faculty;
- Retain more women faculty through their probationary period and the promotion/tenure process;
- Support women associate professors as they move to full professor, and hire advanced rank women to build a critical mass; and
- Promote and hire women faculty into academic leadership positions.

NDSU, through its NSF ADVANCE FORWARD Initiative, developed and implemented the [Advocates & Allies](#) (A&A) approach, a signature program designed to improve gender equity through the direct and proactive engagement of men faculty.

Advocates, senior men faculty who educate themselves about issues of gender inequity; and

Allies, men faculty whom the Advocates train as proponents for gender equity in their departments.

NDSU worked with the following institutions to establish A&A programs on their campuses; members of those campus communities now serve on NDSU's External Advisory Board for the [NSF PLAN](#) project:

- [Lehigh University](#)
- [West Virginia University](#)
- [University of Maine](#)
- [Louisiana Tech University](#)
- [Ohio State University](#)
- [Rochester Institute of Technology](#)
- [University of North Texas](#)
- [University of Wyoming](#)
- [Indiana University](#)

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## University of Michigan's ADVANCE "good practices" website

Here's a link to what Michigan has compiled as a result of their work in improving recruiting and retention of women in the sciences. The current program is now broader than gender and STEM, but it's worth being aware of what they're doing.

<https://advance.umich.edu/about/>

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## Virginia Tech's Advance project, AdvanceVT

Like other Advance programs, the goal is to improve recruiting, retention, and advancement of women in science and engineering, [http://www.advance.vt.edu/resources\\_links/resources\\_links\\_main.html](http://www.advance.vt.edu/resources_links/resources_links_main.html).

*AdvanceVT* works with the Office for Inclusion and Diversity to support search committees in their efforts to hire outstanding faculty members, [https://advance.vt.edu/resources\\_links/search\\_committees.html](https://advance.vt.edu/resources_links/search_committees.html).

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## RESEARCH AND DATA

### 2019 Michigan State University and University of Michigan Study on Diverse Teams

Researchers from Michigan State University and University of Michigan examined diversity in two categories: demographic (race, sex, gender identity, sexual orientation and nationality) and scientific (career stage, academic discipline and tenure on the team).

A sample of 266 participants from 105 National Science Foundation-funded environmental science teams completed questionnaires about individual and team diversity, their satisfaction with their teams and authorship practices, and perceptions of the frequency of data sharing. They also disclosed perceptions of their team climate, including team collaboration, inclusion, and procedural justice, which focused on influencing team policies related to research.

Researchers found that the very individuals who add diversity to their science teams surprisingly do not experience positive outcomes. The study is published in PLOS ONE. [Read article here.](#)

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## 2014 CRA Taulbee Survey Report

Source: Computing Resource News - May 2015

[2014 CRA Taulbee Survey Report.pdf](#)

Relentless Growth in Undergraduate CS Enrollment; Doctoral Degree Production Remains Strong, But No New Record

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## Michigan State University study looks at gender and 'image management'

Say you're a woman, and you're interviewing for a job in a traditionally male-dominated field like engineering. What qualities about yourself should you highlight in your interview? A new MSU study offers some ideas.

Current State's Melissa Benmark spoke with one of study's co-authors, [Ann Marie Ryan](#). She's a professor of organizational psychology at MSU. [Listen \(10 minutes\)](#)

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## Technology at Berkeley

Equity & Inclusion: Working together to ensure an inclusive and positive environment for all.

IST senior management, in partnership with the [IST Action Team](#), and input from staff across the organization are developing an approach to address concerns about equity and inclusion. These are issues we feel strongly must be addressed programmatically, over time, in tangible and specific ways on a number of fronts.

This website shares details about what we are working on and what to expect over the coming months. The IST Equity and Inclusion program is a parallel initiative to RelT Strategy 7: Diversity and Inclusion which aims to integrate equity, inclusion, and diversity into all areas of IT on campus by actively engaging UC Berkeley's training programs, research, and principles of community. We welcome all ideas and feedback for how we can ensure our organization is a positive and safe working environment for all.

For more information about their program and additional resources, [click here](#).

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