PURDUE COMPUTER SCIENCE
DIVERSITY, EQUITY, AND INCLUSION TASK FORCE

CHARGE FOR DIVERSITY, EQUITY, AND INCLUSION TASK FORCE

The task force should assess the current status of the department with respect to diversity, equity, and inclusion. The task force should make recommendations on how the department should achieve the following goals.

Increase diversity among the four major stakeholders within the department:

- undergraduate students
- graduate students
- staff
- faculty

Enhance equity and inclusion of minority groups among the four major stakeholders within the department:

- undergraduate students
- graduate students
- staff
- faculty

Create meaningful outreach activities aimed at strengthening the pipeline for minority computer scientists.

Before making the final recommendations and writing the final report, the department leadership will meet with the task force to discuss the findings and ideas for the recommendations.

The Diversity, Equity, and Inclusion Task Force was formed in late 2020 to assess the current status of the department with respect to diversity, equity, and inclusion, and make recommendations on actions the department should take to increase diversity among students, faculty, and staff, enhance equality and inclusion of minority groups, and strengthen the pipeline for minority computer scientists.

There are opportunities to provide feedback to the task force. The first is a virtual town hall where people are able to ask questions about the contents of the proposal. The second is a qualtrics form available here.

PURDUE CS TOWN HALL

To obtain feedback from stakeholders (students, faculty, staff).

WHERE

Virtual, invitation sent via email.

WHEN

Thursday, May 13, 2021

PURDUE UNIVERSITY Department of Computer Science   CS.PURDUE.EDU/DIVERSITY/INDEX.HTML

PROPOSAL FOR IMPROVING DIVERSITY, EQUITY, AND INCLUSION IN THE DEPARTMENT OF COMPUTER SCIENCE

Goals

Increase diversity, enhance equity, and ensure inclusion of underrepresented minority groups among the four major stakeholders within the Computer Science department: undergraduate students, graduate students, faculty and staff.

Underrepresented/marginalized populations are defined by Purdue as:
- African Americans
- Hispanic/Latinos
- Native Americans
- Native Hawaiian and other Pacific Islanders

We also recognize that women are underrepresented in CS, and LGBTQ individuals are often marginalized or discriminated against.

Understand that building a community for underrepresented individuals in our department is essential to their retention and success.

Additional populations that are underrepresented in CS:
First-generation college students, veterans, people with disabilities, Asian Americans, non-traditional students, multi-racial students, staff and faculty.

In this document, we outline a proposal of action items to address the structural and environmental barriers to success of underrepresented populations in the CS department. We focus on four dimensions: recruiting, retention, policy and procedures, and department climate.

Definitions

Diversity: Diversity characterizes the demographic composition that comprises an entity or organization, oftentimes with the aspiration for its composition to be consistent with the broader local, national, or global population it strives to represent and/or serve.

Equity: Equity characterizes the treatment of persons by entities or organizations, oftentimes with the objective of applying needed interventions to promote fairness and achieve parity.

Inclusion: Inclusion characterizes the involvement and contributions of all persons within the entity or organization, oftentimes with the goal of all its members sharing equally in participating in, and influencing, the entity or organization, i.e., not only being "seen" but also "heard."

The above definitions should be employed in aspirational goals but not used to formulate quotas or thresholds.

1. Recruitment

The department should increase its efforts in its active recruitment of underrepresented groups for the undergraduate and graduate programs, as well as faculty and staff.

1.1 Undergraduate Students
- Prioritizing Domestic students of color
- Expansion of scholarship opportunities (e.g. [Emerging Leaders Scholarship](#))

Outreach
- Increase funding to K-12 outreach. This would increase student participation and provide structure for [MAGIC](#) (Mentors for Aspiring Girls in Computing) and [ROCS](#) (Reach out for Computer Science).
- Hire a K-12 staff member
- Hire a graduate student for the K-12 role (reporting to staff)
- Diversity and Undergraduate Specialist to work together with a K-12 staff member
- Dedicated advisors for K-12 student organizations, to hold them accountable and guide them to do impactful work
- Create clear criteria for K-12 student organizations and guidelines that help them operate. We want to make sure resources are allocated efficiently. Transparency and tracking of funding.
- [Research Experience for Teachers and Research Experience for Undergrads by NSF](#)
- Summer experience for targeted HS students

Scholarships
- Corporate partners and sponsors
- Alumni
- Set money aside that goes to students of color -- GPA considerations might affect current students of color. Look at performance once they are in the department
- Scholarships that have other criteria beyond the GPA, not necessarily GPA-based. There is no equity in only looking at the GPA. Merit-based, service-based
- Renewability of scholarships
- Scholarships should support dedicated mentors

Pipeline program
Working directly with high schools that have a high URM student population to bring students to visit Purdue, and enroll in week-long camps. Can give them a leg up when they apply to school. Give them priority for scholarships. See Outreach, above.

180x
- Provide funding for students who participate in the course so that they can credit towards their first CS class. It is currently available and students can pay to transfer credit. It can be connected to the pipeline program.
- Considering CS18000 can be intimidating for incoming students, the department should find ways to provide a supportive introduction to the area and major. Include awareness that students have differing backgrounds (e.g., little to no experience in Java).

Bridge program
- Create incentives for people to participate in the program. There is funding for URM students to participate in the program. We are not sure of how many students are aware of funding being an option to participate. This should be investigated and advertised.
- Have students provide testimonials of how helpful it was to be part of the Bridge program.
- Expand Bridge or create a track for 177. Other considerations include a program on top of the Bridge for URM students, creating cohorts and providing a sense of community within the department.

1.2 Graduate Students

Pipeline program and bridge program for graduate students.
- [AGEP](#) Alliance for Graduate Education and the Professoriate
- Nominate admitted URM students to the [Graduate Bridge Program](#)
- Early matriculation with mentor experience
- Accelerated summary courses in the summer to "fill gaps"
- Establish cohorts/community
- [SROP](#) (Summer Research Opportunity Program)

Funding for the Master's students
Identify URM PhD applicants that are offered admission into the Master's program and offer them funding. Support them to transition into the Ph.D. program.

Place an emphasis on recruiting cohorts as opposed to individuals.

Create a funded summer research internship program for domestic URM students.
Expand existing summer internship programs like [GoBoiler](#) to target domestic URM undergraduate and master students that are interested in pursuing further graduate studies. This program consists of a paid summer internship with a faculty member. This program could be complemented with seminars and social activities to integrate participants into the department. Given that similar programs already exist in the department, most of the infrastructure is already in place. This model is currently being applied in other departments (See [Engineering Pathways Program](#)). The advantage of this would be that it could be managed within CS, unlike the SROP program. It is key to have faculty that are invested in the program to guarantee its success. This was the case with GoBoiler.

Target key universities and conferences for recruitment, by organizing physical and virtual events.
Ask current graduate students to help with this. We have been doing this to some extent, but we need to expand our efforts. Invite prospective students to visit the department. In this document, we provide a list of HBCUs and HSIs with strong CS undergraduate programs. This must be based on genuine interest in the students.

Top Historically Black Colleges and Universities for STEM ([source](#))
- Fort Valley State University
- Morgan State
- Prairie View A&M
- Norfolk State
- Alabama State
- Spelman
- Morehouse

Hispanic Serving Institutions for STEM ([source](#))
- Florida International University
- New Mexico State University
- Texas A&M University
- University of Arizona
- University of California - Irvine, Riverside
- University of Puerto Rico
- University of Southern California
- University of Texas-El Paso

Top HBCUs and HSI institutions for CS
- North Carolina A&T State University
- Howard University
- Bowie State University
- Alabama A&M University
- Morgan State University
- Florida A&M University
- Norfolk State University
- Fayetteville State University
- Xavier University of Louisiana
- California State University, Dominguez Hills
- Florida International University
- New Mexico State University
- Texas A&M University-Corpus Christi
- University of Houston-Downtown
- University of Puerto Rico, Mayaguez

Conferences
- Tapia, NSBE, AfroTech, Grace Hopper, WyCIS, BlackComputeHer

1.3 Faculty
Establish a chair for a professor and recruit an outstanding scholar from one or more underrepresented populations.
- Think in terms of attracting a group rather than a single individual.
- Find ways to incentivize faculty to support summer programs, recruitment, mentorship, etc.
- Explore how to move faculty from awareness to allies.

1.4 Staff
- Explore how to move staff from awareness to allies
- Diversity, equity and inclusion training for all staff members.
- Empower staff to have the ability to be an ally outside of the classroom in order to create a more inclusive environment.

Some resources are (also included in retention recommendations for faculty):
- Umoja Student Development Corporation
- Inclusive Resolutions
- Crossroads Antiracism
- EducatorAide

2. Retention

Mentoring programs
Create structured mentoring programs with the goal of enhancing the experiences of all undergraduates, graduates, faculty, and staff. The main goal of these programs should be to increase the retention of women and underrepresented minority students in the department. There are currently some informal student-led peer mentoring programs in place in the department (administered by USB and GSB). A formal, department-led initiative centering a focus on URM students and women (including faculty) can be a beneficial stepping stone for creating a community-based ecosystem that provides guidance and support at various levels of the department. Other departments at Purdue (See Agricultural Sciences M@P) have similar initiatives.

Improve TA selection and training
- Gather more information on why current students do not engage with TAs.
- Establishing an interview process for UTA selection can be beneficial, the current selection procedure is based only on GPA and course grade.
- Improve training of GTAs, and pay particular attention to international GTAs. Provide incoming graduate students with resources to become successful, compassionate TAs.
- We recognize that the department has made efforts to improve the TA programs since 2015, but there is still ample room for improvement. Accountability and continuous evaluations are important.

Diversity Training for Faculty and Staff
Include discussions about the climate in the department and current issues in the faculty staff meetings. Recommend diversity   training at the faculty retreat. Some recommended programs are:
- Umoja Student Development Corporation
- Inclusive Resolutions
- Crossroads Antiracism
- EducatorAide

"Brave Spaces"
Create brave spaces that encourage transparent and vulnerable conversations from students, faculty, and staff within the department. Providing spaces for members of the CS community is important for making individuals feel a sense of belonging, loyalty, and pride. These spaces can be held collectively as a department or as needed with "Brave Space Ambassadors" basis or by creating a system to identify brave spaces and brave space ambassadors that have been vetted for such conversations.
- "Brave Space Ambassadors" are faculty/staff/students who have been vetted and identified as individuals that are committed to creating an inclusive and inviting environment within the department. Such individuals are expected to uphold a level of confidentiality within the guidelines of the university as well as those established by the department.
- Ambassadors may be available for "drop in'' or scheduled discussions and assistance, possibly combine with an ombudsperson function.

Constructive sharing of experiences
Encourage open discussions about experiences from students, faculty, and staff. Participants can be interviewed or shared on a panel for current and past members of the department. Sharing may also occur through the CS online portal that is only available to current members of the department.

3. Policy and Procedures
- Ensure graduate applications from underrepresented/marginalized populations are fully reviewed. Perhaps ensure that they are also reviewed by a few experienced faculty members in MS and PhD admission committees who are identified for the purpose.
- Ensure that policy and procedures for filing various kinds of complaints against other members of the department are clearly communicated to all the parties.
- Ensure that graduate and undergraduate TAs are trained to be more professional and sensitive.
- Equity in hiring practices of faculty and staff.
- Equitable teaching from faculty, TAs, and GTAs.

4. Department climate

- We might defer this section due to the [Diversity Equity Task Force](#) from Purdue will be releasing something similar.
- Create a feedback/suggestion mechanism for people in the department to submit ideas and experiences.
- Climate Survey

4.1 Miscellaneous Ideas

- A "CS is for everybody" permanent but changing display inside the lobby area in Lawson. Feature individuals from history and present day who are part of underrepresented groups.
- Possibly some diversity recognitions or awards provided by corporate partners to be given prominence similar to academic-oriented awards
- Stage showings (some formal, some informal during the day) of material on the screens in the Lawson Commons, such as the film "Coded Bias"
- Official "meet, visit, greet" days with the Black Cultural Center to encourage CS personnel to visit and learn.
- Host a shared exhibit of notable Black computing scientists' work.