Departmental BPC Plan Department of Computer Science Cornell University



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Contact: Hakim Weatherspoon, Associate Dean for Diversity, Equity, and Inclusion,

<u>assoc-dean-dei@cis.cornell.edu</u> and Eva Tardos, Chair of the Department of Computer Science, chair@cs.cornell.edu;

Cornell University is a private, highly competitive research university, attracting a student body from across the country and also from around the world. As of Fall 2023, the percentage of women in our various programs is 39.3% of the undergraduates, 35% of the MEng students in Ithaca, 36% of the MEng students at the Tech campus, 30% of the Ithaca MS, 30% of all PhD students (Ithaca and Tech campus combined), and 22% of the faculty. The percentage of Black, Latinx, Native American, and Pacific Islander (BLNP) students 15%; 3% for Black and Latinx (MEng in Ithaca), 6% of Latinx (MEng at the Tech campus), 11%, 15% Black, Latinx (MS students), and 7% (PhD students), and 3% of the faculty are Black. We are only now starting to collect data on students with disabilities.

In service of the mission to increase inclusion, we are working toward the following goals during this term.

- **G1**. Each year, improve reports of the **climate** for BLNP students and women. This includes the following activities:
 - **(A1) supporting programming with student groups**, including groups such as Women in Computing at Cornell (WICC), UnderRepresented Minorities in Computing (URMC), Graduate UnderRepresented Minorities in Computing (Grad-URMC), Graduate Students for Gender Inclusion in Computing (GSGIC) [Weatherspoon];
 - (A2) encouraging students after setbacks via **morale-boosting sessions** in the introductory courses, which we expect to contribute to BPC because of research suggesting that women and BLNP students tend to report lower self confidence in introductory courses [Tardos];
 - (A3) diversifying the TA-pool and running training for TAs including bias training [Fan],
 - (A4) introducing bystander training for both faculty and graduate students [Tardos]; and
 - (A5) organizing reading groups to educate our community about issues that hinder broadening participation [Damle, Dean and Hirsh].
- **G2**. Each year, increase the percentage of BLNP and women students and faculty in the program to match the percent in Engineering at Cornell via activities that enhance **outreach**, **recruitment**, **and retention** of BLNP and women students and faculty.
 - **(A6)** We sponsor attendance at national diversity events, such as sending faculty, and 30+ undergraduate and graduate students to the Tapia and the Grace Hopper conferences, and may expand this to AfroTech [Weatherspoon].
 - (A7) We host an annual **High Schools Girls Programming Contest** between Ithaca and New York City [van Renesse], and
 - **(A8)** We organize an outreach to high school students in Africa called **CodeAfrique** [Van Renesse, Weatherspoon].

We have several outreach and recruitment efforts of women and BLNP students:

- **(A9) SoNIC Summer Research Workshop** targets increasing participation of BLNP students at the Ph.D. level in computing [Weatherspoon];
- (A10) the Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS) rotates between Cornell, Maryland, and Max-Planck and targets increased representation of women in the PhD [Alvisi].

- **(A11)** We are running a **student applicant support program** to help BLNP students apply to PhD programs [Chattopadhyay].
- (A12) Our Bowers Research Experience Program (BURE) is offering summer research experience to students aiming to help Cornell undergraduates consider research and graduate school. We also started an extension of this program **BURE-Next** aimed at offering this research experience to BLNP students [Weatherspoon].
- (A13) We are increasing outreach to potential women and BLNP faculty through personal contacts and Rising Stars in EECS and the Tapia conference attendance list, and running Rising Star workshops in subareas of computer science. [Tardos].
- (A14) We further develop and continue running a Rising Sophomore Summer Program (CSMore) for BLNP students who might want to be CS majors [Tardos, Weatherspoon].
- (A15) Cornell's Prefreshman Summer Program (PSP) and ASCEND offer a residential experience that helps prepare students for college; typically over 50% of students in these programs who are interested in CS are women and BLNP students. We have reserved PSP spots for a few additional students interested in CS. We will also offer additional support for PSP students who take the introduction to computing course in their pre-freshman summer [Weatherspoon].
- (A16) Freshman courses, such as introduction to computing, are accompanied by one-credit Academic Excellence Workshops (AEWs), taken by many BLNP students. We plan to expand these offerings to sophomore and junior courses [Weatherspoon and Tardos].
- G3. Each year, increase faculty involvement with BPC programs outside of Cornell.
 (A17) Cornell Tech BPC activities, including the Breakthrough Tech-Al New York City program, hosted at Cornell Tech, which partners with public universities to boost representation of women and non-binary students in Al; and a robust BPC-focused K-12 initiative enhancing CS education in NYC public schools. Faculty support these initiatives by giving talks to BLNP K-12 and undergraduate students, hiring interns, providing curriculum consultation, and participating in campus visits [Estrin].

Metrics for success: To track composition across our program, we will collect the following data annually, broken down by gender and demographic category:

- (a) composition of undergraduate, master's, and PhD students and faculty;
- (b) drop rates for the core courses for our major;
- (c) rate at which freshmen taking introductory computing courses choose to major in CS;
- (d) composition of master's program applicants, acceptances, and enrolled students;
- (e) composition of students who leave the masters and PhD program without a degree; and
- (f) composition of faculty applications, interviews, offers, and acceptances.

To monitor climate issues in our undergraduate program, we will conduct an annual survey through the CRA Data Buddies program. To monitor climate issues in our PhD program, we will rely on the bi-annual graduate school survey. We will augment this survey with targeted surveys developed with student leaders to address particular issues that arise.

Further, Cornell is part of the NSF Leadership in the Professoriate (LEAP) alliance, a coalition of the 11 top computing schools who are sharing admissions and retention strategies aimed at increasing the number of BLNP and disabled students who enter and finish the PhD with the long-term goal of significantly altering the composition of the professoriate.