Broadening Participation in Computing Plan
School of Computing, University of Utah

Effective dates of BPC Department Plan: January 2020 through July 2020
Revision of plan will begin: August 2020
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Context: University of Utah is the only R1 research university in Utah. The state population is over 78% White, 14% Hispanic/Latinx, and every other racial or ethnic group comprises less than 3% of the population. The overall undergraduate student population is 47% female and 13% Hispanic/Latinx, while in the School of Computing, it is 13% female and 8% Hispanic/Latinx. All statistics represent the Spring 2019 baseline.

University of Utah is in Salt Lake City, within the urban Salt Lake City School District (SLCSD). SLCSD is unique in the state because of its minority majority population; 56% of 2018's 23,410 SLCSD students belonged to a minority group, predominantly Hispanic/Latinx. More than half the district's elementary and middle schools are Title I schools.

Analysis of class demographics shows that retention of women students drops disproportionately through the early course sequence. For example, for the cohort entering in Fall 2015, the percentages of women for each course in a typical semester sequence: CS0 = 24%, CS1 = 17%, CS2 = 13%, SoftEng1 = 12%, SoftEng2 = 9%.

BPC Goals:

The University of Utah School of Computing aims to create an inclusive environment for all of our students. We further seek to substantially increase the percentage of women and underrepresented minorities (with an emphasis on Hispanic/Latinx students) among our undergraduate students over the next ten years to better reflect the demographics of the university and local K-12 population, with the following concrete goals:

1. Expand undergraduate mentoring and research to increase recruiting and retention of groups underrepresented in computing by more than 50% in five years, with an emphasis on women and Hispanic/Latinx students.
2. Promote community-building activities for diverse students, critically important for retention of women and Hispanic/Latinx students given the context.
3. Create computing-specific K-12 outreach programs for local Title I schools with diverse populations, with the goal of stimulating early interest in computing.

BPC Activities and Evaluation:

To achieve the above goals, the School of Computing at University of Utah is engaging in several ongoing programs. PIs in the School of Computing can use this departmental plan by selecting among these programs the activities in which they would like to engage. In addition to the activities listed, Inclusivity Training is being held in faculty meetings.

- **NCWIT Learning Circle:** University of Utah is working with the National Center for Women in Information Technology to collect data, identify opportunities to improve

recruiting and retention of women, and collaborate with other Learning Circle institutions. [Goals 1, 2; Leader: Tucker Hermans]

- **NCWIT Northern Utah Aspirations Award Volunteers:** Faculty will volunteer to review nominations, assist the organizing committee, and attend this annual event that recognizes achievements of local female high school students. [Goals: 3; Leader: Bei Wang Phillips]
- **Undergraduate Out-of-Classroom Engagement:** To retain students beyond sophomore year, the SoC undergraduate advisors will recommend to all students that they should participate in one of the following activities by the end of sophomore year: (1) undergraduate research; (2) teaching assistantships; (3) other faculty engagement, such as competitions, working in other departments and local events; or, (4) outside internships. Faculty will actively seek out students from underrepresented groups to participate in these activities. [Goals 1, 2; Leader: Ryan Stutsman]
- **Sponsor ACCESS Students:** Faculty will sponsor incoming freshman females through the ACCESS program, where freshman will do a rotation in their research lab. [Goals 1, 2; Leader: Suresh Venkatasubramanian]
- **Grace Hopper, Tapia and Rocky Mountain Celebration Participation:** Faculty will sponsor students from underrepresented groups to attend these conferences. [Goal 2, Leader: Mahdi Bojnordi]
- **High School Internship Program:** Faculty mentor students from underrepresented groups through a high school internship. [Goal 3; Leader: Eliane Wiese]
- **GREAT Camp Scholarships and Curriculum:** Faculty will provide scholarships for students from underrepresented groups to attend Graphics & Robotics Exploration with Amazing Technology (GREAT) Summer Camp, which brings to campus several hundred elementary, middle and high school students every summer. In exceptional cases, faculty will introduce new curricula. [Goal 3, Leader: David Johnson]
- **FIRST Robotics in After School Programs at Title I Schools:** Faculty will support For Inspiration and Recognition in Science and Technology (FIRST) robotics in Title I schools for teams where a majority of students are from underrepresented groups. [Goal 3; Leader: Mary Hall]

This Departmental BPC Plan has now been used for multiple funded proposals. We plan to update it every summer, evaluating effectiveness of the activities, and revising who is responsible. In addition to measurements of specific activities, we will track the following metrics using the Spring 2019 numbers in the Context section as a baseline.

1. Percentage of faculty participating in this BPC Plan.
2. Percentage of underrepresented students participating in research, mentoring and community-building activities, measured through custom CRA Data Buddies survey questions to our students.
3. Demographic shifts of undergraduate student population, relative to university and local population.
4. Number of underrepresented students per year participating in K-12 outreach programs.