

Broadening Participation: The Community College as a Key Partner

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Abstract—There is a looming shortage of computing professionals in the United States and globally. The shortage of women and minorities further exacerbates this shortage. Community colleges are inherently diverse spaces and can play a significant role in broadening participation in computing (BPC) as well as in adding more graduates to the field. This panel will discuss strategies to include community colleges as a key partner in the conversation on broadening participation. In addition to the broader efforts, the panelists will discuss BPC efforts at their institutions.

Keywords—*broadening participation in computing, women in tech, minorities in tech, community college*

I. THE PROBLEM AND THE SOLUTION

Data from the National Center for Women & Information Technology (NCWIT) show that by the year 2026, the number of computing related job openings in the US are expected to be 3.5 million. Yet, only 19% of these jobs will be filled by students graduating with a bachelor's degree—leaving a large gap. The computer science & information technology job sector is growing fast yet institutions of higher education have been unable to produce enough graduates to meet this growing demand. The lack of women and other underrepresented minorities reduces an already diminished workforce much further.

Institutions of higher education—both universities and community colleges—can work to bridge the diversity and workforce gap through collaborative efforts. In this panel, the panelists will discuss include strategies to build a more diverse student body and resources to attract more women to computer science/information technology at community colleges while building pathways to the university. The panelists will discuss resources—at the local and national level—that can be utilized by institutions of higher education, in particular community colleges, while designing and developing curriculum, spaces, and activities to draw more minorities and women into the field.

Most importantly, the panelists will discuss the key role of community colleges in the BPC conversation, including the outcomes from a workshop held at Google in January 2018—the Authentic Inclusion of Community Colleges in Broadening Participation in Computing workshop.

II. PANELISTS

AMARDEEP KAHLON (MODERATOR) is a Professor of Computer Science and director of Fast Track to Success at Austin Community College. She firmly believes that community colleges can play a key role in broadening participation in computing. Compared to a four-year school, the community college population is very diverse, not just in ethnicity, race, age, and gender but also in levels of educational attainment. It is imperative for community colleges and four-year schools to work together to remove the barriers to transfers thereby increasing the diversity and the numbers of CS/IT graduates. Her work at the community college includes directing a successful Women in IT program and articulation pathways and share will share the lessons learned from these experiences.

DEBORAH BOISVERT, Executive Director of BATEC Center for Computing at UMass Boston, is dedicated to broadening participation in computing through professional development for educators, problem-based learning for students, and strategic planning for education, industry, and government. She serves on the Steering Committee for CSforMA, a coalition of education (PK-12 and Post-Secondary), business, industry, government, and community leaders dedicated to ensuring that ALL K-12 students in Massachusetts receive high-quality instruction in computer science in every grade level from Kindergarten through 12th grade. She believes that a holistic system of problem-based coursework and multiple touchpoints in an upward trajectory must interweave awareness, preparation and advancement throughout the academic and work-based learning components to increase the success of minority students. This belief has accentuated the need for community colleges as an integral part of the Broadening the Participation conversation.

LORI POSTNER is Professor of Computer Science at Nassau Community College, a part of the State University of New York (SUNY). As an attendee at the NSF workshop held at Google, as well as a participant in the Lighthouse for CS online course for community college faculty, she has become passionate about ways to broaden participation in computing through community college involvement. She is the Co-PI on an NSF grant focused on incorporating HFOSS (humanitarian free and open source software) into the computing curriculum. By using the lens of computing for social good, she hopes to attract students from traditionally under-represented populations. As a community college professor, she has a diverse population of students and sees the opportunity to change

the landscape of who enters and persists in computing. She is also acutely aware of the challenges that community college students face completing their degrees and transferring to 4-year programs.

III. REFERENCES

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