Putting BPC into Practice: Charting a Course to Aligning Your Computing Demographics With Those of Your University

For the last two decades, professors, non-profits, philanthropists, the NSF and other agencies have been working to broaden participation in computing (BPC) in higher-ed. Launched in 2019 with funding from Pivotal Ventures LLC, an investment and incubation company created by Melinda French Gates, the Center for Inclusive Computing (CIC) is working in partnership with colleges and universities across the country to increase the representation of women – of all races and ethnicities – in computing. Today, the CIC is engaged with 22 partner schools – UCF among them – with the goal of identifying and removing their specific institutional barriers. In her talk, Dr. Brodley will explore the most common institutional barriers the CIC is seeing across its portfolio, and will dig into the barriers most relevant to UCF.

Dr. Brodley is the Dean of Inclusive Computing at Northeastern University, where she serves as the founding Executive Director for the CIC. She served as Dean of Khoury College from 2014-2021. During her tenure as Dean, the representation of women majoring in computing increased from 19 percent to 32 percent. Dr. Brodley’s interdisciplinary machine learning research led to advances not only in computer science, but in other areas including remote sensing, neuroscience, digital libraries, astrophysics, content-based image retrieval of medical images, computational biology, chemistry, evidence-based medicine, and predictive medicine. Her numerous leadership positions include having served as program co-chair of the International Conference on Machine Learning, co-chair of AAAI, co-chair of CRA-WP, and associate editor of JAIR, JMLR, and PAMI. She was a member of the DSSG, and she served on the boards of International Machine Learning Society, the AAAI Council, and ISAT. She is currently on the CRA Board of Directors, and on the Board of Trustees of the Jackson Laboratory.
Broadening Participation in Computing at UCF

At UCF, women make up a small percentage of undergraduate CS and IT majors. Since UCF’s CS and IT undergraduate programs are so large, this contributes to the lack of diversity in solutions in the entire field. A first step towards addressing this problem is to revise the undergraduate curriculum in CS and IT, so that students who have no prior experience will feel more welcomed. This short talk briefly explains the department’s situation and plans.

Dr. Leavens is a professor in the Department of Computer Science at UCF. After joining UCF in August 2007, he became associate chair in 2008, and was department chair from 2010-2021. He led a successful faculty cluster proposal in cyber security and privacy. His research is in formal methods. Previously, Dr. Leavens was a professor of computer science at Iowa State University where he started in 1989, after receiving his doctorate from MIT. Before graduate studies at MIT, he worked at Bell Telephone Laboratories in as a member of technical staff.

Dr. Dagley is the Executive Director of the Center for Initiatives in STEM (iSTEM) at UCF. She has served as PI and Co-PI on numerous NSF projects, facilitates the women’s mentoring network at UCF and was recently awarded funding to create a STEM learning community model for transfer students. In addition to guiding undergraduates towards a successful path in STEM, Dr. Dagley directs the STEM K-12 outreach and teacher training initiatives for the Colleges of Sciences and Engineering and Computer Science, and works with faculty interested in STEM education and education research. She serves as PI for a Center for Inclusive Computing grant.