

## How you can make a difference: Bootstrapping efforts toward gender balance

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### 1. INTRODUCTION

Students and professors often leave Grace Hopper inspired, but with little concrete direction on how to begin working toward gender balance at their schools. How can a few people, or even just one person, get things going and make a difference? Panelists will share how they started women in computing efforts at their schools, focusing on finding effective and achievable ways to work within their particular environment and the lessons learned along the way. Some examples are leveraging departmental and faculty support to start a CS outreach program and rallying other students to begin a women in CS group. Participants will get the opportunity to form concrete plans that make sense within the context of their own universities. They will discuss multiple possible activities while considering the needs of their communities in the light of local factors, such as the availability of faculty support and female representation within the department.

### 2. AUDIENCE

The audience is expected to consist of students and professors who are interested in working towards gender balance at their universities. We estimate the audience to be at least twenty people.

### 3. PLAN OF ACTION

15 minutes: The panelists introduce themselves and discuss their efforts at their school for approximately three minutes each.

15 minutes: The moderator takes audience questions and leads panel discussion about challenges they have faced and how they got started. Some possible issues are: figuring out what to do to be the most effective, recruiting students and publicizing events, finding support and staying motivated, and investing effort in ways that generate the most impact.

20 minutes: Audience members break up into small groups of five members based on type of school environment. They will devise action plans for their own schools through discussion of a provided list of suggestions and ideas, as well as formulating their own. Groups can bounce ideas off of panelists who will help facilitate the conversations. The small-group session enables participants to plan activities appropriate for their local context and also creates small communities of support.

10 minutes: The groups share their plans for activities at their universities, so that by announcing their goals, participants will be more committed to making it happen. Audience members write down aspects of their school environment and their plans and potential challenges moving forward, and reorganize into new groups for a quick iteration of feedback, suggestions, and support by passing around the written summaries.

### 4. OUTCOMES

Participants will leave with concrete plans and inspiration for how they can work towards gender balance at their home universities. The panel will help individuals, particularly students, see themselves as someone who can “do something” about the lack of women in computing by developing plans to make a tangible and effective difference at their school. In addition, the participants will have formed a rudimentary support system with women facing similar challenges at other universities.

### 5. MODERATORS/PANELISTS

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### **MODERATOR**

Colleen Lewis, Harvey Mudd

Colleen Lewis recently received her PhD in Computer Science Education from the University of California, Berkeley and is now a faculty member at Harvey Mudd. Colleen's research focuses on issues of access to Computer Science for students that are underrepresented in the field. She is collaborating with researchers from the University of Washington, Seattle to study students' processes of deciding to major in CS and the impact of various department initiatives to support women in pursuing CS. At UC Berkeley, Colleen founded an outreach program for incoming freshman women that are interested in CS. She has served as the president and outreach coordinator for the graduate group for women in CS and EE.

### **PANELISTS**

Fiona Tay, Harvey Mudd College

Fiona Tay is a graduate of Harvey Mudd College, whose CS department's success in recruiting women inspired her efforts. She is a founding member of the Claremont ACM-W chapter and has organized advising activities and professional development workshops for younger CS majors. She has also initiated outreach to non-majors, holding a departmental open house and collaborating with PyLadies Los Angeles to run an introduction to programming workshop. She is now an agile engineer at Pivotal Labs San Francisco, where she hopes to continue her outreach work through the San Francisco chapter of PyLadies.

Sharon Mason, Rochester Institute of Technology

In her role as the Executive Director of Women in Computing at RIT, Sharon has cultivated programs for the support and retention of women students, faculty and staff in the computing college and outreach to K-12 women in the community. Since 2008, WIC has supported nearly 100 events and reached more than 1000 people through purposeful programming and assessment. Sharon is a co-organizer of the New York State Regional Celebration of Women in Computing. She is also a co-PI on the NSF funded ADVANCE IT-Start project, "Establishing the Foundation for Future Organizational Reform and Transformation @ RIT" (EFFORT@RIT), which involves collecting and analyzing data on the factors that women seek in an academic position and determining how well RIT provides for these.

Sophia Westwood, Stanford University

Sophia Westwood is a Computer Science major at Stanford University, where the percentage of female CS majors has remained below 20% over the past decade despite high female enrollment in the introductory course. In the fall of 2011, she started a program where undergraduate female section leaders set up individual chats with well-performing freshman and sophomore women in the introductory Stanford CS classes to extend a sense of welcome, explore resources, and answer questions. With funding from the department, she also began twice-a-quarter dinners for undergrad women studying CS to casually meet and hang out, drawing interest from over 100 students from freshman through grad students. While starting these programs, she worked closely with faculty and the section-leading community to analyze the situation and come up with simple ways to address issues.

Seniha Esen Yuksel, University of Florida

Seniha Esen Yuksel was the graduate advisor for the University of Florida's Society of Women Engineers (SWE) chapter where she led the SWE GrOWE (Graduate Organization for Women Engineers) and formed a community of female graduate students. She is currently a postdoctoral researcher in the Materials Science and Engineering Department at the University of Florida where she is developing algorithms for explosive detection from hyperspectral imagery. She received the Ph.D. degree in Computer Engineering from the University of Florida, Gainesville, in 2011 with specialization in landmine detection and machine learning; the M.Sc. degree in Electrical and Computer Engineering from the University of Louisville, Kentucky, in 2006 with specialization in medical imaging; and the B.Sc. degree in Electrical and Electronics Engineering from the Middle East Technical

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University, Turkey, in 2003. Her research interests include machine learning, statistical data analysis, applied mathematics and computer vision.