Broadening Female Participation in Computer Science
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What is your project?
To attract and retain female participation in computer science from middle school through undergraduate studies through program development and curriculum reform.

Why did you choose it? (What is the benefit to you, your institution, and/or AMI/CNWL?)
This is a previously funded NSF project to which I am already committed. The benefit to me is to complete this project. The benefit to Colorado School of Mines (CSM) is the potential of increasing female enrollment within computer science. The benefit to AMI is that this project seeks to contribute to the development of future female leaders.

How have you pursued it? What are your successes and/or stumbling blocks to date?
We have implemented both an academic year club for high school students and a summer camp for middle school students in computer science. A great deal of effort has been dedicated to the revision of the CSM computer science curriculum in a manner that is likely to appeal to women. The major stumbling blocks are: i) despite our efforts to use best practices to attract females to our middle school and high school programs, boys continue to display greater interest and participation in these programs, and ii) despite our efforts to revise the CSM computer science curriculum in a manner that research suggests should appeal to women, we continue to have limited female enrollment.

What, if anything, needs to happen next?
Increasing female enrollment in computer science from our current student population has not been successful. The women entering CSM already know what majors they wish to pursue and there is a very limited base from which to draw. Given this, we are currently developing a program which includes high school guidance counselors. Additionally, we are in the process of developing a “show on the road” that will be presented at local high schools with the hope of attracting girls to pursue computer science degrees.

How did you or will you evaluate success?
We have several forms of evaluation. Surveys and pre and post tests are used for Tech Camp and Tech Club. Significant changes have been witnessed for Tech Camp. For Tech Club, we have not been able to acquire a strong measure because of the transient nature of the school, making pre and post test results difficult to interpret. We have also tracked enrollment in our computer sciences courses, administered classroom based surveys and completed interviews. These have helped us to refine our curriculum development efforts.

How and with whom will you share your accomplishment/contribution?