

Department of Mathematics and Statistics Colloquium

Gender and Doctoral Mathematics: Impactful Factors for the Success of Female Students

Job Candidate

Abstract: Although the gender gap in participation in undergraduate mathematics has all but closed, significant disparities still exist at the doctoral level. Multiple studies hypothesizing a biological basis for this disparity have been inconclusive or have failed to find significant results. So, why then does this gender gap persist? In this presentation, I will describe two studies aimed at identifying factors associated with the success of female students in mathematics doctoral programs. In the first study, I designed and administered a survey to a sample of 142 female mathematics professors employed at prestigious U.S. universities. While not generalizable to the larger population, the results of this study shed light on the negative experiences of even the most successful female students. The second study, designed to be more generalizable and provide more nuanced results, aims to identify factors that are most crucial to success for female graduates employed at a wide range of post-secondary institutions and to compare these factors to those identified as most crucial by male graduates employed at the same institutions. To achieve these goals, the survey instrument from the first study was revised and administered to a stratified, random sample of male and female mathematics professors at colleges and universities in the U.S. Together, these studies provide a better understanding of issues of doctoral student retention and enable the formulation of an initial set of “best practices” so that more female students can be successful in doctoral-level mathematics. I will conclude the presentation by briefly discussing my current work, examining the emergence and magnitude of gender disparities in mathematics at the elementary level in a large-scale, nationally representative data set.

Wednesday, December 2 at 2:30 in Roop 103
refreshments at 2:15