



## Zeta functions all the way

Program for Women in  
Mathematics  
May 15 - May 26, 2006  
A Program of the  
Institute for Advanced Study  
and Princeton University

### Beginning Lecture Course

Lecturers: Giuliana Davidoff, Mount Holyoke College  
Margaret Robinson, Mount Holyoke College

### Advanced Lecture Course

Lecturers: 1st week - Kate Okikiolu, U.C.S.D.  
2nd week - Audrey Terras, U.C.S.D.

The zeta functions of number theory, algebraic geometry, differential geometry, and graph theory will be our topic. Among other things, we will show how zeta functions are useful when one wants to know how many primes there are which are less than or equal to  $x$ , the number of solutions of an equation over a finite field, the analytic torsion of a manifold, the behavior of a closed path in a graph upon lifting to a covering graph.

\* undergraduate students \* graduate students \* postdoctoral scholars  
[www.math.ias.edu/womensprogram](http://www.math.ias.edu/womensprogram)