



The Math/Stats Colloquium  
Department of Mathematics and Statistics  
San José State University



# Ayelet Lindenstrauss

Indiana Univ.

*How to tell how many holes  
there are on a pretzel  
(without counting them)*

FEBRUARY 19, 2014, MH320

**Abstract:** We will begin with polyhedra we know: pyramids, cubes, platonic solids, and others. Counting their respective vertices, edges, and faces, we will notice a pattern which generalizes to all sorts of other surfaces, and enables us to describe surfaces which occur in solutions of different kinds of mathematical problems. We will prove the formula we observe using elementary spherical geometry.

*Background:* None.

**About the speaker:** Ayelet Lindenstrauss received her Ph.D. from Princeton University and is now an Associate Professor of Mathematics at Indiana University. This semester she is visiting MSRI for a special program in her research area, algebraic topology.

SNACKS IN MH331B AT 2:30 PM

TALKS START AT 3 PM

For more information, see our full schedule at:

<http://www.math.sjsu.edu/~hsu/colloq/>