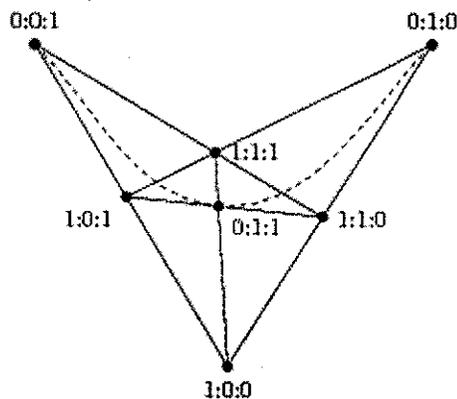# The SUMO Speaker Series for Undergraduates

(Pizza Provided)
Wednesday, March 2nd
4:15-5:05, room 380C

Accidental Isomorphisms
Professor Daniel Bump

ABSTRACT:
Groups typically occur in infinite families. For example, all but 26 of the the finite simple groups are either alternating groups or one of several infinite families of "matrix groups". Generally there are no overlaps between these families, but when there is an "accidental isomorphism" there is usually something interesting to be said. We will look at some examples, in particular the following: the simple group of order 168 has two very different realizations, as a group of automorphisms of the one-dimensional projective geometry over the field with seven elements, or the two-dimensional projective geometry over the field with two elements. Showing that these two groups are the same will reveal some interesting structure.

sumo.stanford.edu/speakers