

The SUMO Speaker Series for Undergraduates

(Pizza Provided)

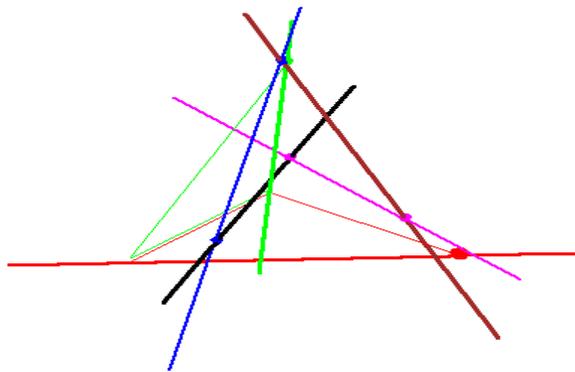
Wednesday, March 30th

4:15-5:05, room 380C

Given four lines in space, how many other lines meet all four?

The geometry, topology and combinatorics behind linear algebra

Professor Ravi Vakil



ABSTRACT:

The "Grassmannian", parameterizing k -dimensional subspaces of n -space, naturally arises as an important tool in many fields. Questions like the one in the title are really questions about the "geometry of the Grassmannian". Although in some sense the Grassmannian is just about linear algebra, it has an incredibly rich and subtle structure. (For example, the answer to the above question is neither 0, 1, nor infinity!) We'll investigate some of this structure, and see how it links several seemingly unrelated parts of mathematics. (No background will be required!)

sumo.stanford.edu/speakers