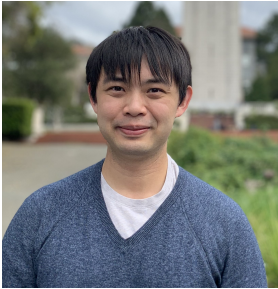




The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University



Alvin Jin

MIT

*Topological Data Analysis and
the Pursuit-Evasion Problem*

WED OCT 25, 2023, MH320

Abstract: Imagine you are in a mall, trying to escape detection from security guards. The security guards move around, and their fields of view change over time. This scenario describes the *pursuit-evasion problem*. In this talk, we will introduce some tools from algebraic topology that will help us study the geometric properties in this problem. One of the ideas is called “homology” — where we study the presence of holes in the scenario. We will model our scenario using simplicial complexes and look at how homology changes over time.

Background: One semester abstract algebra. No prior experience with topology necessary.

About the speaker: Alvin is a postdoc at MIT who works in topology. He received his PhD from KTH Stockholm and grew up in the Bay Area.

SNACKS IN MACQUARRIE HALL 331B AT 2:40PM
TALK STARTS AT 3:00PM

For more information, see our full schedule at:

<http://www.timhsu.net/colloq/>