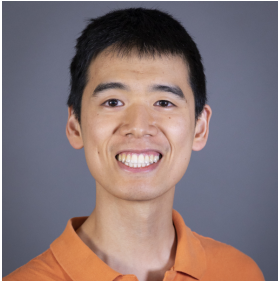




The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University



Alan Chang

Princeton Univ.

The Kakeya needle problem

WED MAY 10, 2023, MH320

Abstract: The Kakeya needle problem asks the following: What is the smallest area in the plane in which a unit line segment can be rotated 180 degrees? This question, which can be solved with elementary geometry, has surprising connections to many other topics (e.g., harmonic analysis, partial differential questions, analytic number theory, theoretical computer science). In this talk, we will give a survey of this classical problem, and then we will discuss a variant where the line segment has been replaced by a curve. (Joint work with Marianna Csörnyei.)

Background: No particular background necessary.

About the speaker: Alan Chang received his Ph.D. from the University of Chicago in 2020 and is currently an Instructor at Princeton. His research interests include harmonic analysis and geometric measure theory.

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/>