

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





Nic Brody UC Santa Cruz Two-by-two Matrices WED SEP 27, 2023, MH320

Abstract: We will take a tour of different approaches to understanding two-by-two matrices (and in particular, for understanding which matrices can be obtained by repeated multiplication of such matrices). To do so, we will combine ancient and modern ideas from geometry, topology, algebra, number theory, combinatorics, and algorithms in order to understand properties of two-by-two matrices. In particular, we will build an infinite dimensional space in which the matrices represent symmetries, and then we will try to reduce the space into something more tangible.

Background: One semester linear algebra.

**About the speaker:** Nic Brody is a Visiting Assistant Professor at UC Santa Cruz. He obtained his PhD in 2022 from UC Berkeley, and was previously an undergraduate at UC Santa Barbara.

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/