

TOPOLOGY SEMINAR

Guest Speaker: Trent Lucas

Brown University

Date: Tuesday, March 26, 2024

Time: 2:30 PM

Location: 258 Hurley Bldg

Zoom Link: NA



Trent Lucas - Brown University

Lecture Title:

Veech Fibrations

Abstract

We present a recipe for building a complex surface (i.e. a 4-manifold) from a translation surface (a polygon with sides identified by translations). We discuss the question of which complex surfaces arise from this construction, and our main result is an effective answer when the translation surface is "algebraically primitive". The topology of the complex surface is closely tied to the geometry of the translation surface, and in particular the action of the "Veech group" on homology. This work is joint with Sam Freedman.