

Swarthmore College

Mathematics & Statistics Department

COLLOQUIUM SERIES 2026-2027



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Flat geometry all around the world

Did you know that Pac-Man lives on a torus, i.e., the surface of a doughnut? Even though his universe exists on a flat screen, upon closer inspection one finds that Pac-Man actually lives on what is called a translation surface, a 2D space which looks flat everywhere, except possibly at a few special points.

In this talk, we will define translation surfaces, we will give many examples, and we will discuss a few different ways one could try to understand what the shape of a "typical" or "average" translation surface is.

Along the way we will discuss joint work with four Swarthmore students who did summer research with me in 2025 as well as joint work with a collaborator at the Universidad Nacional de Colombia, where I completed a Fulbright Scholar grant during the Spring 2026 semester.

Tuesday, September 15
4:15pm Refreshments, 4:30pm Lecture
Science Center 199