

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Max Weinreich
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Date: Thursday, November 2, 2023

Time: 3:30 PM

Location: 258 Hurley Hall

Zoom URL: NA

Lecture Title:

Algebraic billiards and dynamical degrees

Abstract

Billiards is one of the most-studied dynamical systems, modeling the behavior of a point particle bouncing around some space. If the space is a plane region bounded by an algebraic curve, then we can use tools from algebraic geometry to study its billiards map. In this talk, we explain how to view billiards as a complex algebraic correspondence, and we prove upper bounds on the dynamical degree, the growth rate of the degrees of the iterates, in terms of the degree of the boundary curve.