Mathematical Billiards Program Seminar
Friday, December 8·10:30 – 11:30am

Location: 313

Speaker: Max Weinreich (Harvard University)

Title: Algebraic billiards and dynamical degrees

Abstract: Complex billiards is a complexification of discrete-time real billiards in an algebraic curve, introduced by Glutsyuk. In this talk, we investigate its dynamical degree, a difficult-to-compute invariant that measures the asymptotic growth rate of the degrees of the iterates. We show that the dynamical degree of billiards in a general plane curve of degree d is approximately $2d^2$. This allows us to get upper bounds on the topological entropy of classical billiards in algebraic curves.