abstract

IAS/PU NUMBER THEORY
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

A well known theorem of Duke states that the collection of all closed geodesics of a given discriminant on SL(2,Z) \ H becomes equidistributed as the discriminant goes to infinity and can be proved using subconvex estimates for L-functions. Substantial partial results in this direction were given earlier by Skubenko using the methods of Linnik which employ ergodic theoretic ideas, and implicitly entropy.

We prove the analogue result regarding periodic orbits of the diagonal group on SL(3,Z) \ SL(3,R) (or [almost] equivalently, compact flats in the locally symmetric space SL(3,Z) \ SL(3,R) / S0(3,R)) using a combination of L-function and ergodic techniques.

This question for n>3 is open (and interesting).