Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, November ,28 2019*

At *11:10 – 12:00*

In *101-*

Manuel Luethi (Tel-Aviv University)

will talk about

Effective equidistribution of primitive rational points along long horocycle orbits and disjointness to Kloosterman sums

Abstract: An observation by Jens Marklof shows that the primitive rational points of a fixed denominator along the periodic unipotent orbit of volume equal to the square of the denominator equidistribute inside a proper submanfiold of the modular surface. This concentration as well as the equidistribution are intimately related to classical questions of number theoretic origin. We discuss the distribution of the primitive rational points along periodic orbits of intermediate size. In this case, we can show joint equidistribution with polynomial rate in the modular surface and in the torus. We also deduce simultaneous equidistribution of primitive rational points in the modular surface and of modular hyperbolas in the two-torus under certain congruence conditions. This is joint work with M. Einsiedler and N. Shah.