



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 290C ,Ziskind Building
on Tuesday, Jan 09, 2018
at 11:15

Efrat Bank
University of Michigan, Ann Arbor

Correlation between primes in short intervals on curves over finite fields

Abstract:

In this talk, I present an analogue of the Hardy-Littlewood conjecture on the asymptotic distribution of prime constellations in the setting of short intervals in function fields of smooth projective curves over finite fields.

I will discuss the definition of a "short interval" on a curve as an additive translation of the space of global sections of a sufficiently positive divisor E by a suitable rational function f , and show how this definition generalizes the definition of a short interval in the polynomial setting.

I will give a sketch of the proof which includes a computation of a certain Galois group, and a counting argument, namely, Chebotarev density type theorem.

This is a joint work with Tyler Foster.