

Department of Mathematics, BGU

Algebraic Geometry and Number Theory

On Wednesday, November ,29 2017

At 15:10 – 16:30

In Math 101-

Lior Yanovski (Hebrew University (

will talk about

Homotopy cardinality and the l-adic continuity of Morava-Euler characteristic (Joint with Tomer Schlank)

Abstract: A finite set has an interesting numerical invariant - its cardinality. There are two natural generalizations of “cardinality” to an (homotopy) invariant for (suitably finite) spaces. One, is the classical Euler characteristic. The other is the Baez-Dolan “homotopy cardinality”. These two invariants, both natural from a certain perspective, seem to be very different from each other yet mysteriously connected. The question of the precise relation between them was popularized by John Baez as one of the “mysteries of counting”. Inspired by this, we show that (p-locally) there is a unique common generalization of these two invariants satisfying some desirable properties. The construction of this invariant relies

on a certain l -adic continuity property of the sequence of Morava-Euler characteristics of a given space, which seems to be an interesting “trans-chromatic” phenomenon by itself.