

Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On Thursday, January, 11 2024

At 11:10 – 12:00

In 101-

Izhar Oppenheim (BGU)

will talk about

Banach Fixed Point Properties of Higher Rank Groups

Abstract: A classical Theorem of Delorme-Guichardet states that a group G has property (T) if and only if every continuous affine isometric action of G on a Hilbert space has a fixed point.

There was a conjecture (attributed to Margulis) that for simple higher rank algebraic groups, this result has the following far reaching generalization: For a simple higher rank algebraic group with a finite center G , every continuous affine isometric action of G on a uniformly convex space has a fixed point.

This conjecture was recently settled by the joint works of V. Lafforgue, Liao for the non-Archimedean case, and myself, and de Laat and de la Salle in the real case.

In my lecture, I will discuss the history of the conjecture mentioned above and a further generalization of its solution beyond algebraic groups (namely, for higher rank universal lattices and Steinberg groups).