Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, April ,24 2025*

At *11:10 – 12:00*

In *101-*

Nadav Kalma (BGU)

will talk about

Ends of Stationary Random Subgroups

Abstract: In this talk, we will explore the structure of ends of Schreier graphs associated with stationary random subgroups (SRS). We begin with the classical Freudenthal-Hopf theorem on the possible number of ends of Cayley graphs and extend it to the setting of random subgroups. First, we establish the result for Schreier graphs of invariant random subgroups (IRS) before further generalizing it to stationary subgroups.

We will then introduce the concept of stationary actions, stationary random subgroups, and present the key result: For a group Γ with a symmetric generating set, the number of ends of the Schreier graph of an SRS is almost surely ,0 ,1 ,2 or infinite.

Finally, we will outline the proof of this theorem, emphasizing the emergence of the "no-core" phenomenon in stationary actions, which is an interpretation of Kac's lemma within the framework of stationary actions.