

Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On Thursday, January 7, 2021

At 11:10 – 12:00

In Online

Guy Salomon (Weizmann Institute)

will talk about

Amenability, proximality, and higher order syndeticity

Abstract: An action of a discrete group G on a compact Hausdorff space X is called proximal if for every two points x and y of X there is a net g_i in G such that $\lim(g_i x) = \lim(g_i y)$, and strongly proximal if the action of G on the space $\text{Prob}(X)$ of probability measures on X is proximal. The group G is called strongly amenable if all of its proximal actions have a fixed point and amenable if all of its strongly proximal actions have a fixed point.

In this talk, I will present a correspondence between (strongly) proximal actions of G and Boolean algebras of subsets of G consisting of certain kinds of “large” subsets. I will use these Boolean algebras to establish new characterizations of amenability and strong amenability. Furthermore, I will show how

this machinery helps to characterize “dense orbit sets” answering a question of Glasner, Tsankov, Weiss, and Zucker.

This is joint work with Matthew Kennedy and Sven Raum.

Please Note the Unusual Place!