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 fi 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 fi the action of G on the space Prob(X) of probability measures on X is proximal. The group G is called strongly amenable fi all of its proximal actions have a fixed point and amenable fi 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!