Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, February ,6 2020*

At *11:10 – 12:00*

In *101-*

Yuqing (Frank) Lin (The University of Texas at Austin)

will talk about

A subshfit of finite type with two dffierent positive sofic entropies

Abstract: Dynamical entropy is an important tool in classfiying measure-preserving or topological dynamical systems up to measure or topological conjugacy. Classical dynamical entropy theory, of an action of a single transformation, has been studied since the 50s and 60s. Recently L. Bowen and Kerr-Li have introduced entropy theory for actions of sofic groups. Although a conjugacy invariant, sofic entropy in general appears to be less well-behaved than classical entropy. In particular, sofic entropy may depend on the choice of sofic approximation, although only degenerate examples have been known until now.

We present an example, inspired by hypergraph 2-colorings from statistical physics literature, of a mixing subshfit of finite type with two dffierent positive topological sofic entropies corresponding to dffierent sofic approximations. The measure-theoretic case remains open. This is joint work with Lewis Bowen and Dylan Airey.