Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, June ,9 2022*

At *11:10 – 12:00*

In *room ,106 building 28*

Edgar Bering (Technion)

will talk about

Topological models of abstract commensurators

Abstract: Given a group G, an Eilenberg-MacLane space X = K(G,1) provides a topological model of both G and Aut(G). The latter is understood via Whitehead's theorem as the group of pointed homotopy equivalences of X up to homotopy. When X has rich structure, such as the case of a closed surface group, this point of view leads to a rich understanding of Aut(G). Motivated by dynamics and mathematical physics, Biswas, Nag, and Sullivan initiated the study of the universal hyperbolic solenoid, the inverse limit of all finite covers of a closed surface of genus at least two. Following their work, Odden proved that the mapping class group of the universal hyperbolic solenoid is isomorphic to the abstract commensurator of a closed surface group. In this talk I will present a general topological analog of Odden's theorem, realising Comm(G) as a group of homotopy equivalences of a space for any group of type F. I will then use this

realisation to classfiy the locally finite subgroups of the abstract commensurator of a finite-rank free group. This is joint work with Daniel Studenmund.

Please Note the Unusual Place!