Department of Mathematics, BGU

Colloquium

On *Tuesday, November ,15 2022*

At *14:30 – 15:30*

In *Math 101-*

Yatir Halevi (Hafia University)

will talk about

Definably semisimple groups interpretable in p-adically closed fields (Joint work with Assaf Hasson and Ya'acov Peterzil)

Abstract: Identfiying and characterizing the groups and fields one can define in various first order structures has had multiple applications within model theory and in other branches of mathematics. We focus here on p-adically closed fields. Let K be a p-adically closed field (for example, Q_p). We will discuss some recent results regarding interpretable groups and interpretable fields in K:

(1 Let G be an interpretable group. If G is definably semisimple (i.e. G has no definable infinite normal abelian subgroups) group, then there exists a finite normal subgroup H such that G/H is definably isomorphic to a K-linear group.

(2 Let F be an interpretable field. Then F is definably isomorphic to a finite extension of K.

No knowledge in model theory will be assumed, but some basic knowledge in logic will help.