Department of Mathematics, BGU

AGNT

On *Wednesday, November ,24 2021*

At *16:00 − 17:15*

In *101-*

David Corwin (BGU)

will talk about

Quadratic Chabauty and Beyond

Abstract: I will describe my work (some joint with I. Dan-Cohen) to extend the computational boundary of Kim's non-abelian Chabauty's method. Faltings' Theorem says that the number of rational points on curves of higher genus is finite, and non-abelian Chabauty provides a blueprint both for proving this finiteness and for computing the sets. We first review classical Chabauty-Coleman, which does the same but works only for certain curves. Then we describe Kim's non-abelian generalization, which replaces abelian varieties in Chabauty-Coleman by Selmer groups (a kind of Galois cohomology) and eventually "non-abelian" Selmer varieties. Finally, we describe recent work in attempting to compute these sets using the theory of Tannakian categories.