

Department of Mathematics, BGU

AGNT

On Wednesday, June 3, 2020

At 15:00 – 16:15

In Zoom info will be sent to the seminar mailing list

URIYA FIRST (HAIFA)

will talk about

The Grothendieck–Serre conjecture for classical groups in low dimensions

ABSTRACT: A famous conjecture of Grothendieck and Serre predicts that if G is a reductive group scheme over a semilocal regular domain R and X is a G -torsor, then X has a point over the fraction field of R if and only if it has an R -point. Many instances of the conjecture have been established over the years. Most notably, Panin and Fedorov–Panin proved the conjecture when R contains a field.

I will discuss a recent work with Eva Bayer-Fluckiger and Raman Parimala in which we prove the conjecture for all forms of GL_n , Sp_n and SO_n when R is 2-dimensional, and all forms of GL_{2n+1} when R is 4-dimensional. (The ring R is not required to contain a field.) In the course of proving this, we also establish the exactness of the Gersten–Witt complex of an Azumaya algebra with involution (A,s) over a semilocal regular ring R , provided the Krull dimension of R or the index of A are sufficiently small.

Relevant definitions will be recalled during the talk.

Please Note the Unusual Place!