

Department of Mathematics, BGU

Algebraic Geometry and Number Theory

On *Wednesday, June ,21 2017*

At *15:10 – 16:30*

In *Math 101-*

Avraham Aizenbud (Weizmann)

will talk about

**Counting representations of arithmetic groups
and points of schemes**

Abstract:



Ben Gurion University - Mathematics
Algebraic Geometry and Number Theory Seminar

Speaker **Avraham Aizenbud (Weizmann)**
Title **Counting representations of arithmetic groups and points of schemes**
Date Wednesday, 21 June 2017
Time 15:10 – 16:30 (starts 15:10 sharp)
Location Room -101 in Building 58

Abstract We will discuss the following question: How many irreducible representations of a given dimension n do groups like $SL_d(\mathbb{Z})$ have? We will see how this question is related to the number of $\mathbb{Z}/n\mathbb{Z}$ -points of certain schemes. Those are related to singularities of moduli spaces, pushforward of smooth measures, commutators of random elements in finite groups, jet schemes and more. As a result of those connections, we will show that the number of such representations is bounded by a polynomial in n whose degree is universally bounded for high rank arithmetic groups (by 40). See slides on http://aizenbud.org/5Talks/Rep_count_talk_glob_long.pdf
This is a joint project with Nir Avni.

(updated 19 June 2017)