

21 января 2022 г (пятница)

в 17:00

по адресу: ул. Усачева, д.6, аудитория 306

На семинаре выступит



Гриша Тароян

с докладом:

**Infinitely transitive Ga-
actions on A^2 .**

Abstract: I will discuss infinite transitivity of additive actions on the affine plane in characteristic 0.

It is an interesting and challenging problem to think about automorphisms of affine varieties. Automorphism groups in this case are huge and it is often not clear how to approach them. As it turns out the picture is bad, but not nightmarish.

Firstly, any automorphism group of an affine algebraic variety admits structure of an ind-group (i.e. ind-group object in the category of affine varieties). This concept was first introduced by Shafarevich in his mistake-filled paper [S]. Study of this structure is a somewhat manageable task, which attracts significant interest nowadays.

Secondly, Ind-topology of the group $\text{Aut}(V_\Sigma)$ for toric variety V_Σ can be studied using methods of toric geometry. On this way Arzhantsev, Kuyumzhiyan and Zaidenberg developed a powerful "degeneration technique", see [AKZ].

We will show an application of the methods above to the problem of infinite transitivity for actions of root subgroups on the affine plane.

Our talk is based on the joint work with Alisa Chistopolskaya, see [CT] (but don't look!).

References:

[AKZ] Arzhantsev, Ivan, Karina Kuyumzhiyan, and Mikhail Zaidenberg. "Infinite transitivity, finite generation, and Demazure roots." *Advances in Mathematics* 351 (2019): 1-32.

[S] Shafarevich, Igor Rostislavovich. "On some infinite-dimensional groups. II." *Izvestiya Rossiiskoi Akademii Nauk. Seriya Matematicheskaya* 45.1 (1981): 214-226.

[CT] Chistopolskaya, Alisa, Taroyan, Gregory. "Infinite transitivity for automorphism groups of the affine plane." (In preparation)

Приглашаются все желающие!