

Department of Mathematics, BGU

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# Arithmetic applications of o-minimality

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*On Tuesday, March ,9 2021*

*At 10:10 – 12:00*

*In online*

Kobi Peterzil (Hafia)

will talk about

## **Analyticity, algebraicity and definability – on the o-minimal version of Chow's Theorem**

Abstract: Chow's theorem says that a compact analytic submanifold of projective space is algebraic. A generalization of this result (proved with Starchenko) says that a complex analytic subvariety of affine space which in addition is definable in some o-minimal structure over the reals is algebraic.

In these 2-3 talks I will speak about the history of this problem, several related and less known results, and the reasons to expect the theorem to be true (not a full proof).

Some minimal background on definability in structures, as well as basics of o-minimality will be assumed.