

Department of Mathematics, BGU

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# BGU Probability and Ergodic Theory (PET) seminar

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*On Thursday, May 6 2021*

*At 11:10 – 12:00*

*In Online*

Tsachik Gelander (Weizmann Institute)

will talk about

## **Infinite volume and infinite injectivity radius**

Abstract: We prove the following conjecture of Margulis. Let  $M=\Lambda\backslash G/K$  be a locally symmetric space where  $G$  is a simple Lie group of real rank at least 2. If  $M$  has infinite volume then it admits injected contractible balls of any radius. This generalizes the celebrated normal subgroup theorem of Margulis to the context of arbitrary discrete subgroups of  $G$  and has various other applications. We prove this result by studying random walks on the space of discrete subgroups of  $G$  and analysing the possible stationary limits.

This is a joint work with Mikolaj Fraczyk.

**Please Note the Unusual Place!**