

Department of Mathematics, BGU

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BGU Probability and Ergodic Theory  
(PET) seminar

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*On Wednesday, March ,4 2020*

*At 12:10 – 13:00*

**In 101-**

Anton Hase (Technion)

will talk about

**Dynamics of the outer automorphism group on  
the second bounded cohomology of a free group**

Abstract:

# Dynamics of the outer automorphism group on the second bounded cohomology of a free group

Antonius Hase

March 1, 2020

The  $\text{Out}(G)$ -action on the group cohomology  $H^k(G)$  of a group  $G$  is an important object of study in group theory. On the contrary, almost nothing is known about the corresponding  $\text{Out}(G)$ -action on the bounded group cohomology  $H_b^k(G)$ . For the free group  $F_n$  and  $k = 2$ , this action is given by the action of  $\text{Out}(F_n)$  on quasimorphisms  $Q(F_n)$ . In this talk, we will study the action of  $\text{Out}(F_n)$  on counting quasimorphisms, which form an invariant, dense subspace of  $Q(F_n)$ . There the dynamics of the unipotent elements in  $\text{Out}(F_n)$  will be presented concretely and visualized. In particular we will explicitly characterize all invariant finite-dimensional subspaces.

**Please Note the Unusual Day and Time!**