Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, May ,11 2023*

At *14:00 – 15:00*

In *101-*

Sergey Komech (The Institute for Information Transmission Problems)

will talk about

Geometric approach to the Kolmogorov entropy

Abstract: A connection between the deformation rate of a small set boundary in the phase space of a dynamical system and the metric entropy of the system was claimed (not too rigorously) in physics literature.

Rigorous results were obtained by B. Gurevich for discrete time Markov shfits and later generalized for synchronized systems by me. Further, such a connection was established in joint work by B. Gurevich and S. Komech for Anosov dfifeomorphisms, and for suspension flows in joint work by B. Gurevich, S. Komech and A. Tempelman. For symbolic dynamical systems, we estimate deformation rate in terms of an ergodic invariant measure, while for Anosov systems we use the volume. We will present specfiic details of our approach.

Please Note the Unusual Time!