Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, January ,10 2019*

At *11:00 – 12:00*

In *101-*

Nishant Chandgotia (The Hebrew University of Jerusalem)

will talk about

Universal models for Z^d actions

Abstract: Krieger's generator theorem shows that any free invertible ergodic measure preserving action (Y, μ, S) can be modelled by A^Z (equipped with the shfit action) provided the natural entropy constraint is satisfied; we call such systems (here it is A^Z(universal. Along with Tom Meyerovitch, we establish general specfiication like conditions under which Z^d-dynamical systems are universal. These conditions are general enough to prove that

(1 A sefl-homeomorphism with almost weak specfiication on a compact metric space (answering a question by Quas and Soo and recovering recent results by David Burguet) (2 Proper colourings of the Z^d lattice with more than two colours and the domino tilings of the Z^2 lattice (answering a question by Şahin and Robinson) are universal. Our results also extend to the almost Borel category giving partial answers to some questions by Gao and Jackson.