Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On *Thursday, March ,28 2019*

At *11:10 – 12:00*

In *101-*

Wojciech Samotij (Tel-Aviv University)

will talk about

The lower tail for triangles in sparse random graphs

Abstract: Let X denote the number of triangles in the random graph $G(n,p)$. The problem of determining the asymptotic of the rate of the lower tail of X, that is, the function $f_c(n,p) = logPr(X \geq cE[X])$ for a given $c \ni [0,1)$, has attracted considerable attention of both the combinatorics and the probability communities. We shall present a proof of the fact that whenever $p >> n^{-1/2}$, then $f_c(n,p)$ can be expressed as a solution to a natural combinatorial optimisation problem that generalises Mantel's / Turan's theorem. This is joint work with Gady Kozma.