

Department of Mathematics, BGU

Colloquium

On Tuesday, November ,17 2015

At 14:30 – 15:30

In Math 101-

Yaar Solomon (Stony Brook university)

will talk about

The Danzer problem and a solution to a related problem of Gowers

Abstract: Is there a point set Y in \mathbb{R}^d , and $C > 0$, such that every convex set of volume 1 contains at least one point of Y and at most C ? This discrete geometry problem was posed by Gowers in ,2000 and it is a special case of an open problem posed by Danzer in .1965 I will present two proofs that answers Gowers' question with a NO. The first approach is dynamical; we introduce a dynamical system and classify its minimal subsystems. This classification in particular yields the negative answer to Gowers' question. The second proof is direct and it has nice applications in combinatorics. [This is a joint work with Omri Solan and Barak Weiss].