

Department of Mathematics, BGU

Combinatorics Seminar

On Tuesday, April, 30 2019

At 13:00 – 14:00

In 101-

Minki Kim (Technion)

will talk about

Rainbow independent sets in certain classes of graphs

Abstract: Let $\mathcal{F} = (F_1, \dots, F_m)$ be a collection of (not necessarily distinct) sets. A (partial) rainbow set for \mathcal{F} is a set of the form $R = \{x_{i_1}, \dots, x_{i_k}\}$ of distinct elements, where $1 \leq i_1 < \dots < i_k \leq m$ and x_{i_j} is an element of F_{i_j} . We are interested in the following question: given sufficiently many independent sets of size a in a graph belonging to a certain class, there exists a rainbow independent set of size b . In this talk, I will present our recent results on this question, mainly regarding H -(induced) free graphs and graphs of bounded maximum degree. This is joint work with Ron Aharoni, Joseph Briggs and Jinha Kim.