

SEMINARIO SISTEMAS DINÁMICOS DE SANTIAGO

TIME (Mon 1st Apr) 3:30 pm - 4:20 pm
LOCATION CMM

SPEAKER Sebastián Donoso (CMM, Universidad de Chile)

TITLE On subsets with no arithmetic progressions

ABSTRACT

For $N \in \mathbb{N}$, let $\nu(N)$ be the maximal cardinality of a subset of $\{1, \dots, N\}$ that contains no arithmetic progression of length 3. Finding upper and lower bounds for $\nu(N)$ has been a challenging problem for decades.

In this talk I will survey this problem and present a proof of a theorem by Behrend in the 40's, that gave a surprising lower bound to $\nu(N)$.