

Title: Bounds for subsets of $\mathbb{F}_p^n \times \mathbb{F}_p^n$ without L-shaped configurations

Abstract: I will discuss the difficult problem of proving reasonable bounds in the multidimensional generalization of Szemerédi's theorem and describe a proof of such bounds for sets lacking nontrivial configurations of the form $(x,y), (x,y+z), (x,y+2z), (x+z,y)$ in the finite field model setting.