

Public Abstract

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Department:Mathematics

Degree:PhD

Title:EXPLORATIONS OF GEOMETRIC COMBINATORICS IN VECTOR SPACES OVER FINITE FIELDS

We study how large a set of points needs to be in a vector space over a finite field in order for the points to determine all of a certain type of geometric structure. In addition we show that there are key differences between the finite field version of these questions and the corresponding euclidean versions. Several arithmetic consequences are also explored.