The Erdos-Stone Theorem for finite geometries

Date Tuesday, September 25

Time 3:30 pm

Location 303 Mudd

Abstract: For any class of graphs, the growth function $h(n)$ of the class is defined to be the maximum number of edges in a graph in the class on n vertices. The Erdos-Stone Theorem remarkably states that, for any class of graphs that is closed under taking subgraphs, the asymptotic behaviour of $h(n)$ can (almost) be precisely determined just by the minimum chromatic number of a graph not in the class. I will present a surprising version of this theorem for finite geometries, obtained in joint work with Jim Geelen. This result is a corollary of the famous Density Hales-Jewett Theorem of Furstenberg and Katznelson.