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Given a family of convex sets in the  $n$ -dimensional euclidean space, it is natural to define a graph called the intersection graph, where its vertices are the elements of the family and two vertices will have an edge in common if they have a point in common, a similar definition can be done to define uniform intersection  $\lambda$ -hypergraphs, where  $\lambda$  vertices become a hyperedge if the corresponding  $\lambda$  convex sets intersect. It turns out, that there are several Helly type theorems that can be investigated by using chromatic number and extremal theory such as covering or transversal numbers for intersection graphs and hypergraphs. In this talk, we will discuss some of these applications. (Received June 30, 2010)