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The chromatic index of block intersection graphs of Steiner triple systems

A Steiner triple system of order v is a pair (V, \mathcal{B}) , where V is a set of v points and \mathcal{B} is a collection of 3-subsets of points, called blocks, such that every 2-subset of points occurs in exactly one block. The block intersection graph of a Steiner triple system with block set \mathcal{B} is the graph with \mathcal{B} as its vertex set such that two vertices are adjacent if and only if their associated blocks are not disjoint. The chromatic index of a graph G is the least number of colours that enable each edge of G to be assigned a single colour such that adjacent edges never have the same colour. In this talk, we will discuss the chromatic index of block intersection graphs of Steiner triple systems, with particular emphasis on cyclic Steiner triple systems. Additional new results might also be presented.