

Combinatorics Seminar

Injective labelings of graphs

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Abstract: Abstract: In this talk I will discuss the problem of coloring the vertices of a graph with k colors such that the neighborhood $N(v)$ contains all k colors for every vertex v in the graph. The problem is to maximize the value of k for which such a coloring is possible. We show that if G is a d -regular graph, then the maximum is $k = (1 + o(1))d/\log d$ and that almost every d -regular graph required at least $(1 + o(1))d/\log d$ colors. This problem has connections to coding theory, and with this in mind we discuss colorings of the q -ary Hamming cube graphs of dimension n . Some open problems will be given.

Joint work with Bob Chen, Jeong Han Kim and Mike Tait

Monday, March 9 at 3:00 PM in SEO 427
