

Linear heterochromatic number in complete graphs

Juan Jos Montellano
IMATE–UNAM

Let $d_p(n)$ be the Turan number, which is defined as the maximum number of edges in a graph of order n not containing subgraphs isomorphic to K_p . We will show that the minimum number of colors, $h_{p+1}(n)$, such that any surjective $h_{p+1}(n)$ -coloring of the edges of K_n yields a K_{p+1} with edges all of distinct color, can be computed as

$$h_{p+1}(n) = \frac{d_p(n)}{2}, \quad \text{for } 3 \leq p < n.$$