JUAN JOSÉ MONTELLANO, Universidad Nacional Autonoma de Mexico, Instituto de Matematicas, U.N.A.M., Area de la investigacion cientifica, Circuito Exterior, Ciudad Universitaria Coyoacan, 04510 Mexico D.F., Mexico

Some Turan and anti-Ramsey numbers

Let G be a graph obtained by adding a chord to a cycle, and let $C(G)$ be the set of cycles which are subgraphs of G. Here we study the relation between $\mathrm{ex}\big(n, C(G)\big)$ and $f(n, G)$, where $\mathrm{ex}\big(n, C(G)\big)$ is the maximum number of edges of a graph on n vertices with no subgraph isomorphic to an element of $C(G)$; and $f(n, G)$ is the minimum integer k such that for every edge-coloring of the complete graph of order n which uses exactly k colors, there is at least one copy of G all whose edges have different colors.

In particular we show that if G is the diamond (C_4 with a chord), then

$$\mathrm{ex}(n, \{C_3, C_4\}) + 2 \le f(n, G) \le \mathrm{ex}(n, \{C_3, C_4\}) + (n + 1).$$