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Ramsey-goodness

Given two graphs G and H, the Ramsey number $R(G, H)$ is the smallest N such that, however the edges of the complete graph K_N are colored with red and blue, there exists either a red copy of G or a blue copy of H. Burr gave a simple general lower bound on the Ramsey number $R(G, H)$, valid for all connected graphs G: defining $\sigma(H)$ to be the smallest size of any color class in any coloring of H with $\chi(H)$ colors, we have $R(G, H) \geq (\chi(H) - 1)(|G| - 1) + \sigma(H)$. For a given graph H, it is natural to ask which connected graphs G attain this bound. A class of graphs is called Ramsey-good if, for each fixed H, Burr's bound is attained for all sufficiently large graphs G in the class.

In this talk we will give an overview of some known results about Ramsey-goodness, and offer some new results. In particular, we shall explore connections between Ramsey-goodness and the bandwidth.