

Gallai-Ramsey numbers for finding a rainbow triangle or some small monochromatic subgraphs

Colton Magnant*, Georgia Southern University

Given graphs G and H , the k -color Gallai-Ramsey number $gr_k(G : H)$ is defined to be the minimum integer N such that for all $n \geq N$, every k -coloring of the edges of K_n contains either a rainbow colored copy of G as a subgraph or a monochromatic copy of H as a subgraph. Most commonly, we consider the case where $G = K_3$ because of a structural result of Gallai. The possibilities for H are endless. In this talk, we will discuss some known results and some new results for several choices of H .

Keywords: Gallai-Ramsey, edge-coloring, colored subgraphs