

The Spectrum of the Coloration Matrix for the Complete Partite Graph

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Abstract:

This paper talks about eigenvalues of graphs and finding them through making use of the coloration partition. We first define the concept of coloration. We then apply it to compute eigenvalues of some graphs. The concentration will be on graphs having a nontrivial coloration like the complete bipartite graphs $K(m, n)$ and the complete 3 - partite graphs $K(m, n, p)$. The idea can be carried through to the complete n -partite graphs, but the computations then will become more difficult to be concluded.