

Searching for Godsil-McKay switching sets

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Godsil-McKay (for short GM) switching is an operation on a graph that doesn't change the spectrum of the adjacency matrix. For this operation to work the graph needs a special structure, called a GM switching set. An important activity in the theory of graph spectra is the characterization of graphs by their spectrum. GM switching sets provide a tool for disproving existence of such a characterization. In this talk we discuss the search for GM switching sets in Kneser graphs and other graphs in the Johnson association scheme.

(Joint work with Farzaneh Ramezaneh.).