

The characteristic polynomials of hypergraphs and cospectral hypergraphs

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There are abundant conclusions about the characteristic polynomials of graphs. Due to the lack of simple formulas for calculating the characteristic polynomials of hypergraphs, the characteristic polynomials of hypergraphs have few research results. In this talk, we introduce the iterating formula of the characteristic polynomials of k -uniform hypergraphs with pendent edges using the Poisson formula of resultants. The characteristic polynomials of k -uniform hyperstar, k -uniform hyperpath with length 3 and two non-isomorphic cospectral k -uniform hypergraphs are given. And we point out that if two graphs are cospectral, their power hypergraphs are not necessarily cospectral.