On the alpha-spectral radius of the k-uniform graphs

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Let H be a hypergraph with adjacency tensor $A(H)$ and let $D(H)$ be the degree tensor of H. For any real $\alpha \in [0,1]$, $A_\alpha(H) = \alpha D(H) + (1-\alpha)A(H)$ be the α tensor of H which be a generalization of α matrix of graph G, In this talk, we will show how the α-spectral radius changes under some operations on connected k-uniform hypergraphs. We characterize the extremal hypertree for α-spectral radius among k-uniform non-caterpillar hypergraphs with given order, size and diameter. We characterize the second largest α-spectral radius among all k-uniform supertrees on n vertices. Finally, we give a relation between the majorization and the A_α-spectral radius of complete multipartite graphs.