

DREXEL ANALYSIS SEMINAR

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12-1 PM, Korman 245

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Title: Spark of a graph and minimum number of distinct eigenvalues of tree

Abstract: The spark of a matrix A has been studied extensively. We introduce a definition for the spark of a graph which is closely related to the notion of a fort, and we build a connection from the spark of the graph to the maximum failed zero forcing set size. We also look at the full spark scenario. The standard zero forcing number gives an upper bound for the maximum nullity. As the maximum nullity of a matrix is the maximum geometric multiplicity of zero as an eigenvalue, it is also natural to study the appearing multiplicities among the eigenvalues of the matrices. We establish a connection between the number of distinct eigenvalues from level symmetric trees to that of a path.