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Veronika Furst*, Department of Mathematics, Fort Lewis College, 1000 Rim Drive, Durango, CO 81301, and Howard Grotts, Department of Mathematical Sciences, University of Montana, 32 Campus Drive, Missoula, MT 59812. *Tight frame graphs.*

In graph theory, the inverse eigenvalue problem of a graph is to determine all possible spectra of real symmetric (Hermitian) matrices whose off-diagonal pattern of zero/non-zero entries is given by the adjacencies of a graph. An important associated graph parameter counts the minimum number of distinct eigenvalues such a matrix may have. In particular, dual multiplicity graphs, or graphs that permit two distinct eigenvalues, were reintroduced from the perspective of frame theory as those graphs that have a representation by a tight frame. In this talk, based on an undergraduate research project, we will describe a method to classify certain line graphs as tight frame graphs. (Received August 17, 2021)