1172-42-78 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)

