1102-05-66   **Steve Butler*** (`butler@iastate.edu`), 396 Carver Hall, Ames, IA 50011. *Comments on cospectral graphs.*

Given a graph G we can associate it to a matrix in several different ways, e.g., the adjacency matrix, Laplacian, signless Laplacian, normalized Laplacian, and so on. The eigenvalues of each matrix has the ability to give some information about the graph, and at the same time each matrix has limitations into what it can say about the graph. This is because of the existence of distinct graphs which have the same eigenvalues, also known as cospectral graphs. In this talk we will give a brief introduction to this subject, as well as present some simple and surprising constructions of cospectral graphs for the normalized Laplacian matrix. (Received July 15, 2014)