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**Kristin Heysse\*** (keheysse@iastate.edu), 396 Carver Hall, Ames, IA 50011. *Constructions for distance cospectral graphs.*

The distance matrix of a connected graph is the symmetric matrix with columns and rows indexed by the vertices and entries that are the pairwise distances between the corresponding vertices. We give a construction for graphs which differ in their edge counts yet are cospectral with respect to the distance matrix. Further, we identify a subgraph switching behavior which constructs additional distance cospectral graphs. The proofs for both constructions rely on a perturbation of (most of) the distance eigenvectors of one graph to yield the distance eigenvectors of the other. (Received September 19, 2016)