MARK KEMPTON, Brigham Young University
Isospectral Reductions and Quantum Walks

The isospectral reduction of a graph to a subset of its vertex set is a way to produce a smaller, function-weighted graph preserving spectral properties. Recently, cospectral vertices were characterized by isospectral reductions. In this talk, we will discuss this result and follow-up work that shows even stronger connections to the quantum walk matrix.