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Hanmeng Zhan*, zhanhanm@crm.umontreal.ca. *State transfer via orthogonal polynomials.*

Given a weighted graph X with adjacency matrix A , the quantum walk on X is determined by $U(t) = \exp(-itA)$. In analyzing the walk's transport property, the eigenvalues of A play an important role, especially when they come from orthogonal polynomials (e.g. A is tri-diagonal or lies in a Bose-Mesner algebra). I will discuss some results on quantum state transfer in these special cases, emphasizing on the applications of the associated orthogonal polynomials. (Received July 15, 2019)