XIAOHONG ZHANG, University of Manitoba
Perfect state transfer on weighted paths

Let X be a weighted graph, and denote its Laplacian matrix by $L(X)$. Let $U(t) = e^{itL(X)}$. Then $U(t)$ is a complex symmetric unitary matrix. We say that X admits Laplacian perfect state transfer (Laplacian PST) between vertices j and k at time $t = t_0$ if $|(U(t_0))_{j,k}|^2$, the fidelity of state transfer between vertices j and k at time t_0, is 1. It is known that the unweighted path on n vertices admits Laplacian PST only for $n = 2$. In this talk I will show that no weighted path on $n \geq 3$ vertices admits Laplacian PST between its end vertices.