

Computing@PNNL SEMINAR

Quantum Walks on Graphs

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Recently, algebraic and spectral techniques in graph theory have found important applications in quantum information theory via the study of information transfer through networks of interacting qubits. The problem of determining when a quantum state can be transferred perfectly through such a network is of particular interest, and this has been modeled by a so-called “quantum walk” on a graph.

In his talk, Dr. Kempton will discuss results regarding perfect and approximately perfect state transfer in this context within perturbations of various classes of graphs.