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**Shimao Fan, Zhiyong Feng, Sheng Xiong and Wei-Shih Yang\*** (yang@temple.edu).

*Quantum random walks under decoherence.*

In this talk, I will discuss discrete-time quantum random walks on integer lattice subject to various decoherence. The general idea is that the limiting distribution of the rescaled position probability distribution converges to a continuous convex combination of normal distributions under the condition that 1 is the largest eigenvalue of the superoperator with multiplicity one. In particular, I will present our results for the case of coin-space decoherence. (Received September 22, 2012)