

Quantum Information Group Sharif University of Technology

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Title: Error correction using Feedback control scheme

Abstract:

Decoherence is the result of coupling of our system to an environment followed by a unitary evolution of the system and the environment. It is an obstacle to realization of new quantum technologies relying on quantum effects. Therefore there has been much effort put into combating decoherence and various ways to do that have been created. One of the methods to combat noise is to go to the environment and reclaim the lost information. This can be done by measuring the environment, and using the classical information obtained from that measurement to construct an appropriate recovery operation that either partially or completely restores the system (depending on the noise). This method is called feedback control scheme and in this presentation I review this scheme and its characteristics followed by some examples.

Place: <https://vc.sharif.edu/ch/sraeisi>

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