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Continuous Quantum Error Correction for Quantum Annealing enabled by measurement-based feedback

Sunday, January 27, 2019 11:30 AM (25 minutes)

I shall present an approach to continuous error correction with application to error correction of quantum annealing. Our approach is based on use of weak measurements and quantum feedback, together with quantum error correcting codes. I shall present preliminary results using both error detecting and error correcting codes, and discuss the relative benefits of different paradigms of quantum encoding, e.g., via subspace and subsystem codes.

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