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Title: Error correction algorithms in quantum cryptography

Abstract:

Quantum cryptography solves the problem of key distribution, which provides secure data transmission. An important step in quantum key distribution protocols is the correction of errors that occur during the transmission and implementation of the protocol. Here we consider error correction with linear codes such as repetition code, Hamming code, low density parity check (LDPC) code. The paper investigates the increase in the efficiency of error correction using a combination of a repetition code and an LDPC code for a high error probability.