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Construction X for quantum error-correcting codes

Construction X is known from the theory of classical error control codes. We present a variant of this construction that produces stabilizer quantum error control codes from arbitrary linear codes over GF(4). Our construction does not require the classical linear code that is used as an ingredient to satisfy the dual containment condition. We prove lower bounds on the minimum distance of quantum codes obtained from our construction. We give many examples of record breaking quantum codes produced from our construction. This is joint work with Vijaykumar Singh.