

# Hermitian Lifted Codes

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## Abstract

In recent work of Lopez, Malmskog, Matthews, Pinero-Gonzales, and Wooters, we constructed codes for local recovery of erasures with high availability and constant-bounded rate from the Hermitian curve. These new codes, called Hermitian-lifted codes, are evaluation codes with evaluation set being the set of  $\mathbb{F}_{q^2}$ -rational points on the affine curve. The novelty is in terms of the functions to be evaluated; they are a special set of monomials which restrict to low degree polynomials on lines intersected with the Hermitian curve. The resulting codes are neither punctured traditional lifted codes, nor subcodes of previously defined locally recoverable codes on the Hermitian curve. This talk will introduce the codes and bounds on their parameters, and discuss questions for further research.