1171-14-207 **Welington Santos*** (wsantos.math@gmail.com), Rua Frei Gaspar da Madre de Deus, 926, Novo mundo, Bloco 07, Apto 206, Curitiba, Brazil, and **Gretchen Matthews** and **Aidan Murphy**.

Fractional decoding of codes from the Hermitian curve.

Error-correcting coding are been studied in the context of Distributed Storage systems, where we usually face a limitation on the amount of information transmitted for the purpose of decoding, arising the problem of fractional decoding.

Fractional decoding means that the original codeword may be obtained from a received word by using only an α-proportion of symbols of the received word, provided not too many errors have occurred.

In this work, we present a fractional decoding scheme to codes from the Hermitian curve.

$$C(\beta P_\infty) = \{(f(P_1), \ldots, f(P_n)) : f \in \mathcal{L}(\beta P_\infty)\}$$

where $\{P_1, \ldots, P_n\} = \mathcal{H}_q(\mathbb{F}_{q^2}) \setminus \{P_\infty\}$ and

$$\mathcal{L}(\beta P_\infty) = \left\langle x^i y^j : \begin{array}{l} 0 \le i, 0 \le j \le q-1, \\ iq + j(q+1) \le \beta \end{array} \right\rangle \subseteq \mathbb{F}_{q^{2l}}(\mathcal{H}_q). \tag{1}$$

This scheme is inspired by the fractional decoding of Reed-Solomon codes and can be modified to using collaborative decoding of Reed-Solomon codes to improve the correcting capability to performing fractional decoding of codes from the Hermitian curve. (Received August 10, 2021)