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## Skew Generalized Quasi-Cyclic Codes

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In this article we introduce skew generalized quasi-cyclic codes over finite field  $F$  with Galois automorphism  $\theta$ . This is a generalization of quasi-cyclic codes and skew polynomial codes.

These codes have an added advantage over quasi-cyclic codes, since the length of the code  $C$  need not be a multiple of the index of  $C$ . After a brief description of the skew polynomial ring  $F[x; \theta]$ , it is shown that a skew generalized quasi-cyclic code  $C$  is a left submodule of  $R_1 \times R_2 \times \cdots \times R_l$ , where  $R_i = F[x; \theta]/(x^{m_i} - 1)$ ,  $|\langle \theta \rangle| = m$  and  $m | m_i$  for all  $i = 1, \dots, l$ . This method provides a direct construction of many codes with best known parameters over  $GF(4)$ .

Joint work with T. Abualrub, P. Seneviratne

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