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**N. Aydin\***, aydinn@kenyon.edu, and **A. Halilovic**. *A Generalization of Quasi-twisted Codes: Multi-twisted codes.*

Cyclic codes and their various generalizations, such as quasi-twisted (QT) codes, have a special place in algebraic coding theory. Among other things, many of the best-known or optimal codes have been obtained from these classes. We recently introduced a new generalization of QT codes called multi-twisted (MT) codes and studied some of their basic properties. Presenting several methods of constructing codes in this class and obtaining bounds on the minimum distances, we show that there exist codes with good parameters in this class that cannot be obtained as QT or constacyclic codes. This suggests that considering this larger class in searches is promising for constructing codes with better parameters than currently best-known linear codes. Working with this new class of codes motivated us to consider a problem about binomials over finite fields and to discover a result that is interesting in its own right. (Received January 15, 2018)