Abstract

The deep holes of a linear code are the vectors that achieve the maximum error distance to the code. There has been extensive research on the topic of deep holes in Reed-Solomon codes. In this talk, as a generalization of Reed-Solomon codes, we investigate the problem of deep holes in a class of twisted Reed-Solomon codes. The covering radius and a standard class of deep holes of twisted Reed-Solomon codes are obtained for a general evaluation set. Furthermore, we completely determine their deep holes of the full-length twisted Reed-Solomon codes with parameters in a certain range.