Abstract

Maximum distance separable (MDS) codes are optimal in the sense that the minimum distance cannot be improved for a given length and code size. Inspired by twisted Gabidulin codes, twisted Reed-Solomon (TRS) codes were firstly introduced in coding as a generalization of RS codes. MDS codes can be constructed from TRS codes, and most of them are not equivalent to RS codes. In this talk, we give two explicit constructions of MDS TRS codes. In some cases, our constructions can obtain longer MDS codes than that of previous works. Some other results will also be given in this talk. This is joint work with Shengwei Liu.