

## Abstract

Maximal distance separable (MDS) codes are proposed by Cassuto and Blaum for symbol-pair read channels. Similarly to the classical MDS conjecture which states the maximum length MDS codes can achieve, the problem what the maximum length MDS symbol-pair code can reach was proposed. During this talk, we give three constructions for MDS symbol-pair codes. The first two constructions use finite geometry, it completely solves the problem for  $d=5$  and improves the existing constructions for  $d=6$ . The third one using elliptic curve is the best construction for large  $d$  so far. It is a joint work with Gennian Ge, Baokun Ding, Tao Zhang and Yiwei Zhang.