

## Abstract

Recently, Cassuto and Blaum introduced codes for symbol-pair read channels and Yaakobi et al. generalized the coding framework to that for  $b$ -symbol read channels where  $b$  is at least 2. In this talk, we establish a  $b$ -sphere-packing bound. Codes meeting this bound are called perfect  $b$ -symbol codes. We study the existence of linear perfect  $b$ -symbol  $e$ -error-correcting codes over  $F_q$  for  $e < 3b$ . In particular, we construct a family of linear perfect  $b$ -symbol  $b$ -error-correcting codes over  $F_q$  using constacyclic codes.