Meeting: 1003, Atlanta, Georgia, SS 13A, AMS Special Session on Algebraic Geometry Codes

1003-14-1319

Jason G McCullough* (jmccullo@math.uiuc.edu), University of Illinois, Department of Mathematics, Urbana, IL 61801, and Benjamin Lundell (blundell@math.uiuc.edu), University of Illinois, Department of Mathematics, Urbana, IL 61801. A Generalized Floor Bound on the Minimum Distance of Geometric Goppa Codes. Preliminary report.

We present a new bound on the minimum distance of geometric Goppa codes. This result is a generalization of bounds proved by Maharaj et. al., Kirfel and Pellikaan, and Garcia et. al. We also provide examples of improvements to minimum distance estimates for one and two-point codes. (Received October 04, 2004)