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Arya Mazumdar* (arya@cs.umass.edu), 140 Governors Dr, College of Information and Computer Science, University of Massachusetts, Amherst, MA 01002. *Fundamental Limits of Locally Repairable Codes.*

Locally repairable codes (LRC) have recently been a subject of intense research due to theoretical appeal and their application in distributed storage systems. In an LRC, any coordinate of a codeword can be recovered by accessing only few other coordinates. For LRCs over small alphabet (such as binary), the optimal rate-distance trade-off is unknown. In this presentation we provide the tightest known bounds on the rate of LRCs of a given relative distance. (Received August 27, 2016)