Abstract

Local Reconstruction Codes (LRCs) allow for recovery from a small number of erasures in a local manner based on just a few other codeword symbols. They have emerged as the codes of choice for large scale distributed storage systems due to the very efficient repair of failed storage nodes in the typical scenario of a single or few nodes failing, while also offering fault tolerance against worst-case scenarios with more erasures. A maximally recoverable (MR) LRC offers the best possible blend of such local and global fault tolerance, guaranteeing recovery from all erasure patterns which are information-theoretically correctable given the presence of local recovery groups. In this talk, we introduce an approach to construct MR LRCs.