

Steiner codes for disk erasure correction

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Codes for correcting erasures in large disk arrays are developed which have minimum update penalty and low check-disk overhead. The codes obtained are based on Steiner 2-designs with block size 3 and 4 which avoid certain block configurations, and related combinatorial designs.

In this talk, we outline the application of erasure correcting codes in the design of reliable, large arrays of secondary storage devices (disks). Then, the connection with combinatorial designs is developed. Finally, some old and new constructions for erasure codes are established.