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*Multilevel coding and multistage decoding on partial erasure channels*

Partial erasure channels have recently been introduced to model erasure events in applications such as flash memories. We show how multilevel coding and multistage decoding may be applied on different  $q$ -ary partial erasure channels for  $q = p^k$ , and classify when the subchannels are simple  $p$ -ary erasure channels. We show how to choose component codes to achieve channel capacity using multistage decoding in some cases. This is joint work with Carolyn Mayer and Kathryn Haymaker.