

On LP-decoding of low-density parity-check codes over nonbinary fields

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Low-density parity-check (LDPC) codes are defined as the null spaces of sparse matrices. Parity-check codes are especially well-suited for efficient decoding, making them valuable in applications including 5G technology and post-quantum cryptography. There are connections between linear programming (LP) decoding and message-passing iterative decoders which provides insight into decoding failures. In this talk, we examine LP decoding for LDPC codes over the nonbinary fields.

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