Early Stopping Criterion for Message-Passing Decoding of LDLC

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***Abstract*—An early stopping criterion is proposed for low-density lattice codes (LDLC) to reduce the number of decoding iterations. The stopping criterion is based on a new metric which is used to predict the convergence of the iterative decoding algorithm for LDLC. Simulation results demonstrate that the proposed criterion can decrease the average iteration number considerably while the decoding performance degradation is within 0.2dB in the low symbol error rate region. Besides, the proposed criterion can provide a flexible tradeoff between performance and complexity.**

***Keyword*—iterative decoding, low-density lattice codes, message passing, stopping criterion**

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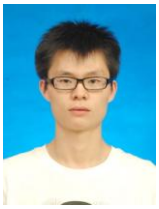

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