Zyablov, V. V.; **Rybin, P. S.**

Analysis of the relation between properties of LDPC codes and the Tanner graph. (English. Russian original) Zbl 1312.94117

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Summary: A new method for estimating the number of errors guaranteed to be corrected by a low-density parity-check code is proposed. The method is obtained by analyzing edges with special properties of an appropriate Tanner graph. In this paper we consider binary LDPC codes with constituent single-parity-check and Hamming codes and an iterative decoding algorithm. Numerical results obtained for the proposed lower bound exceed similar results for the best previously known lower bounds.

MSC:

94B05 Linear codes, general
94B35 Decoding
05C90 Applications of graph theory

Keywords:

low-density parity-check code; Tanner graph

Full Text: DOI

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