

Research on LDPC codes and their application in mobile communications

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Abstract: This topic aims to study LDPC (Low-Density Parity-Check) codes and their application to mobile communication transmission systems. In the context of the strong development of mobile technology, the issue of data transmission performance is a practical necessity. The objective of the topic is to build an optimized transmission system using LDPC codes to improve service quality and save energy. The research method includes both theory and experimentation, combining simulation and application deployment on mobile platforms. Expected results will determine the optimization capability of LDPC codes in mobile transmission systems, contributing to the development of advanced information technology.

Keywords: LDPC codes, mobile communications, data transmission performance, practical applications