

عنوان مقاله:

The Total Transmissions Performance of Sparse Network Coding in Compered with LT codes

محل انتشار:

سومین کنفرانس ملی مهندسی برق و کامپیوتر (سال: 1398)

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خلاصه مقاله:

While Random Linear Network Coding (RLNC) is known to improve network's reliability and throughput, its high costs for delivering coding coefficients and decoding represent an obstacle where nodes have limited power to transmit and decode packets. In order to solve this problem, Sparse Network Coding (SNC) has been recently used as a technique for reducing the decoding and encoding computational complexity of RLNC. This study firstly focuses on characterizing the total number of transmission to recover a generation for SNC considering the effects of the finite field size. Then, it compares the SNC scheme with LT code in terms of the total number of transmissions to decode a generation. Finally, we validate our model using simulation and show that depending on finite field and sparsity level the SNC scheme is able to outperform the LT code with regard to the total number of transmissions

کلمات کلیدی:

Random Linear Network Coding- Sparse Network Coding- The Total Transmissions

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