

Combinatorics Seminar

Thursday, Sept. 22, 2005

1:00 pm in Hume 331

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Decoding of Huffman codes with self-synchronization strings

ABSTRACT

Huffman codes operating on binary trees have been used in many coding and communication systems. While these codes can compress data, they are very sensitive to channel errors. It is shown that a Huffman code may have self-synchronization strings (SSSs) which can stop the error propagation in decoding. Search of these strings and their occurrence probabilities are discussed. The decoding performance by incorporating SSSs with the maximum a-posteriori probability decoding is also presented.