

Source evaluation

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1 Error detecting and error correcting codes (Hamming 1950)

This is a paper by R. W. Hamming, who contributed much to modern error-correcting codes. One of the main encoding types used in my project is even named the Hamming code. It has formed much of the basis of modern communication theory and can certainly be trusted.

2 A mathematical theory of communication (Shannon 1948)

This paper, together with (Hamming 1950) are generally considered to be the seminal works on coding theory. This lays much of the groundwork for communication theory and gives a more general definition of the Hamming Code

3 Generalized dna barcode design based on hamming codes (Bystrykh 2012)

This article is very much relevant to what my project is about. It doesn't seem to be very clear though, and it uses a seemingly inoptimal form of parity. However it provides helpful insight into what actual researchers in the field are doing and have done with these ideas.

4 Introduction to coding theory (Guruswami 2010)

This is not a great academic source, but very helpful for reaching more of a 'layman's' kind of understanding of coding theory.

5 Polynomial codes: an optimal design for high-dimensional coded matrix multiplication (Yu, Maddah-Ali & Avestimehr 2017)

This source is very technically detailed, which isn't necessarily a bad thing but makes it pretty dense. Potentially very useful for a complicated understanding of polynomial codes, although I'm not sure if I'll use polynomial codes.

6 Families of hadamard z2z4q8-codes (del Río & Rifà 2012)

This source turned out not to be very useful as it only relates to a highly specific class of Hadamard code. Other simpler tutorials on the internet are much more useful.

7 Hadamard matrices and their applications (Hedayat & Wallis 1978)

This is a far more appropriate paper that gives a more general overview of what a hadamard matrix is and can be used for. Very useful overall.

8 The search for hadamard matrices (Golomb & Baumert 1963)

9 Hadamard matrices and their designs: A coding-theoretic approach (Assmus & Key 1992)

10 Hadamard designs (Spence 1972)

11 Lifted polynomials over F_{16} and their applications to dna codes (Oztas & Siap 2013)

12 Codes, not ciphers (Baylis 2010)

13 Error correcting codes: Practical origins and mathematical implications (Pless 1978)

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