pds_hbinv.m

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August 23, 2015

Abstract

The function pds_hbinv() represent the inverse function of binary entropy.

1 Introduction

The function pds_hbinv() in the m-file pds_hbinv.m is defined as:

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P = pds_hbinv(H);
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This function represent the formulation of inverse function $h_b^{-1}()$ of binary entropy function $h_b()$; being H the binary entropy of probability P.

$$P = h_b^{-1}(H) \tag{1}$$

$$H = h_b(P) = -P\ log_2(P) - (1-P)\ log_2(1-P) \tag{2}$$

This form is showed in [1].

References

[1] Thomas M. Cover and Joy A. Thomas. Elements of Information Theory 2nd Edition. Wiley Series in Telecommunications and Signal Processing. Wiley-Interscience, 2 edition, July 2006.