

# pds\_hb.m

Fernando Pujaico Rivera

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## Abstract

The function `pds_hb()` represent the binary entropy.

## 1 Introduction

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

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```
H = pds_hb(P);
```

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This function represent the formulation of binary entropy  $H$  of probability  $P$ .

$$H = -P \log_2(P) - (1 - P) \log_2(1 - P) \quad (1)$$

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.