

论文

OFDM系统中基于恒模的盲信道估计算法

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摘要

该文提出了一种适用于采用PSK调制方式的正交频分复用(OFDM)系统的准盲信道估计算法。该算法首先利用系统信号的恒模特性得到有限个可能的信道, 然后利用信号的有限字符特性从可能信道中寻找出最佳信道, 因而具有较低的计算复杂度。与现有的盲信道估计算法不同, 该算法利用二阶统计量而不是高阶统计量估计信道, 获得了较好的估计性能。仿真结果表明, 该算法的性能优于基于有限字符特性的盲信道估计算法。

关键词 [正交频分复用](#) [盲信道估计](#) [恒模](#)

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Constant Modulus Based Blind Channel Estimation for Orthogonal Frequency Division Multiplexing Systems

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Abstract

A novel blind channel estimation scheme is proposed for Orthogonal Frequency Division Multiplexing (OFDM) systems employing PSK modulation. This scheme is composed of obtaining a small number of possible channels by exploiting the constant modulus property and choosing a best fit over the possible channels by exploiting the finite alphabet property of information signals, thus it has low computation complexity. It estimates the channel by exploiting the second-order statistics rather than the high-order statistics of the received signal, which means that the new algorithm can achieve competitive performance. Simulation results show that the new scheme outperforms the finite-alphabet based channel estimator.

Key words [Orthogonal Frequency Division Multiplexing \(OFDM\)](#) [Blind channel estimation](#) [Constant modulus](#)

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