

论文

一种基于折线逼近的对数似然比简化算法

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摘要

针对16QAM信号的对数似然比计算, 该文提出一种新颖的折线逼近简化算法, 采用分段的折线逼近16QAM信号的对数似然比曲线, 进而使用简单的线性运算替代原标准LLR算法中复杂的非线性运算, 仿真结果表明, 该算法可以理想地逼近标准LLR算法的计算结果, 在BITCM系统中应用不会带来系统的性能折损。

关键词 [16QAM](#) [对数似然比算法](#) [折线逼近](#) [BITCM](#)

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A Simplified Log-Likelihood Ratio Algorithm with Broken Line Analysis

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Abstract

In this paper, a novel simplified algorithm with broken line analysis is proposed for the log-likelihood ratio calculation of 16QAM signals. In this novel algorithm several line segments are introduced to approach the LLR curves of 16QAM signals, which results that the complicated nonlinear computations in the optimum algorithm are replaced with simple linear one. The simulation show that the algorithm in this paper can be a perfect approach to the optimum LLR algorithm in calculation results; and the performance will not degrade when it is applied in BITCM systems.

Key words [16QAM](#) [Log-likelihood ratio algorithm](#) [Broken line analysis](#) [BITCM](#)

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