

论文

MIMO-OFDM系统中一种新的联合迭代信道估计与符号检测算法

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摘要

该文提出了一种MIMO-OFDM系统中基于MMSE准则的联合迭代信道估计和符号检测算法。联合迭代算法的性能取决于初始信道估计器的精度和迭代算法。首先提出了一种基于时频变换(TFT)的信道估计算法;其次提出了利用初始信道估计值与检测符号在MMSE准则下进行联合迭代信道估计和符号检测的算法。分析和仿真结果显示,在准静态和快时变信道条件下,新的联合迭代信道估计和符号检测算法有效地提高了系统性能。

关键词 [MIMO-OFDM](#) [MMSE](#) [迭代](#) [信道估计](#) [符号检测](#)

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A Novel Joint Iterative Channel Estimation and Symbol Detection Algorithm for MIMO-OFDM Systems

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Abstract

This paper proposes a novel joint iterative channel estimation and symbol detection algorithm based on MMSE criterion for MIMO-OFDM systems. The performance of the joint iterative algorithm mainly depends on initial channel estimator and iterative algorithm. Therefore, a new channel estimation algorithm is developed based on Time-Frequency Transform(TFT), then the joint iterative channel estimation and symbol detection algorithm according to MMSE criterion by using initial channel estimated values and detected symbols is advanced. Analysis and simulation illustrate that the novel joint iterative algorithm improves remarkably performance both quasi-static and fast time-varying channels.

Key words [MIMO-OFDM](#) [MMSE](#) [Iterative](#) [Channel estimation](#) [Symbol detection](#)

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