

论文

一种新的带窗重叠自适应滤波器

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摘要

基于一种带窗重叠自适应滤波器, 将重叠滤波思想引入LMS算法。利用重叠滤波的平滑性, 将加窗重叠滤波和LMS算法相结合, 给出了窗加权重叠LMS(WO-LMS)算法。与传统的LMS算法相比, WO-LMS算法既提高了收敛速度又可以得到较低的稳态均方误差。理论分析了算法的收敛性, 通过与LMS算法的比较, 验证了WO-LMS算法的优越性。

关键词 [自适应滤波器](#) [重叠滤波](#) [最小均方误差算法](#) [学习曲线](#)

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A Novel Overlapping Adaptive Filter with Window

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Abstract

Based on a novel windowed overlapping adaptive filter, LMS algorithm with overlapping idea is introduced. In terms of the smoothness of signals processed by overlapping, a new Windowed Overlapping LMS algorithm(WO-LMS)is presented that combines the windowed overlapping idea and LMS algorithm. In comparison with traditional LMS algorithm, WO-LMS algorithm can achieve both lower steady mean square error and faster convergence speed. Convergence property is theoretically analyzed, and the experimental results prove the superiority of WO-LMS compared with LMS algorithm.

Key words [Adaptive filter](#) [Overlapping filtering](#) [Least Mean Square algorithm \(LMS\)](#) [Study curve](#)

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