

## عنوان مقاله:

Improving Synchronization Performance in Ultra-wideband Communication Systems Using Two-Section Algorithm  
Based on Energy Detection Receiver

## محل انتشار:

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## خلاصه مقاله:

This article aims to investigate synchronization of UWB signals between transmitter and receiver in communication networks. In Ultra wideband technology, synchronization consists of two sections. In the former section coarse synchronization has been accomplished which leads to fine one at the end. In first section of coarse synchronization, maximum detection was utilized. In order to improve the performance of the synchronization algorithm and decreasing the complexity of calculation, in second section of coarse synchronization search back algorithm was presented. Synchronizations were performed in MATLAB and the results were the indication of a decrease in calculation and improvement in synchronization performance. To evaluate the performance of synchronization algorithms MAE, RMSE were utilized as two criteria and the results obtained explains the fact that RMSE criterion in search back algorithm has better performance for lower SNR.

## کلمات کلیدی:

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