

## عنوان مقاله:

The Impact of Unreliable Communications on the Steady-State Performance of Incremental RLS Adaptive Networks

## محل انتشار:

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## خلاصه مقاله:

Adaptive networks are known as appealing solutions for the distributed estimation problem, when the statistical information of the underlying process of interest is not available. In this paper, we study the effect of unreliable communications (modeled by noisy links) on the performance of incremental recursive least-squares (RLS) adaptive networks. The motivation for such study stems from this fact that noisy links strongly affect the performance of adaptive networks. We derive theoretical relations in terms of mean-square deviation (MSD), excess mean-square error (EMSE) and meansquare error (MSE), to explain how the noisy links affect the performance of incremental RLS adaptive networks. In our analysis we evaluate the steady-state performance of the individual nodes across the entire network using the spatial-temporal energy conservation argument. The simulation results show that there is a good match between simulations and derived theoretical expressions

## کلمات کلیدی:

adaptive networks; distributed estimation; least-squares (LS); Incremental RLS

## لینک ثابت مقاله در پایگاه سیویلیکا:

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