

عنوان مقاله:

Massive MIMO Slow-varying Channel Estimation Using Tensor Sparsity

محل انتشار:

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خلاصه مقاله:

In order to exploit the advantages of the massive MIMO systems, it is vital to apply the channel estimation task. The huge number of antennas at the base station of a massive MIMO system produces a large set of channel paths which requires to be estimated. Therefore, the channel estimation in such systems is more troublesome. In this paper, we propose to leverage the temporal joint sparsity of the massive MIMO channels to offer a more accurate channel estimation. To attain this goal, we would model the problem to exploit the spatial correlation among different antennas of the BS as well as the inter-user similarity of the channel supports. In addition, by assuming a slow time-varying channel, the supports of the channel matrices of various snapshots would be equal which enables us to impose the temporal joint sparsity on the channel submatrices. The simulation results validate the efficiency and superiority of the suggested scheme over its rivals.

کلمات کلیدی:

Massive MIMO, Channel estimation, Sparsity, Joint sparsity

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