

A Golay Pair Based Synchronization Algorithm for Distributed Multiple-Input Multiple-Output System

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Abstract : In order to solve the problem of inaccurate synchronization for distributed multiple-input multiple-output (MIMO) system in multipath environment, a golay pair aided timing synchronization method is proposed in this paper. A new synchronous training sequence based on golay pair is designed. By utilizing the aperiodic auto-correlation complementary property of the new training sequence, the fine timing point is obtained at the receiver. Simulation results show that, compared with the tradition timing synchronization approaches, the proposed algorithm can provide high accuracy in synchronization, especially under multipath condition.

Keywords : distributed MIMO system, golay pair, multipath, synchronization

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