

Incremental Hybrid DAF Scheme based Cooperative Spatial Modulation

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Abstract—In this paper, we propose a cooperative spatial modulation (SM) system combined with incremental hybrid decode-amplify-forward (IHDAF) scheme, which can select direct transmission or the corresponding relaying protocol according to the instantaneous channel signal-to-noise ratio (SNR). The signal processing scheme has also been provided. Simulation results of the system outage probability show that the proposed cooperative SM system with IHDAF scheme outperforms the conventional cooperative SM systems, such as amplify-and-forward (AF) based SM and decode-and-forward (DF) based SM. Furthermore, the influence of the relay location and power allocation factor on the outage probability performance has also been investigated for the IHDAF based cooperative SM system.

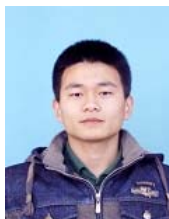
Keyword—cooperative spatial modulation; IHDAF; outage probability; power allocation factor; relay location



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