

Transmit Diversity Tradeoff between Spectral Efficiency in Spatial Modulation-STBC with ZF, MMSE, and Sphere Decoder

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Abstract - Transmit diversity is easier to achieve by STBC but at the same time it is not feasible to define spectral efficiency, so achieve the tradeoff between that spatial modulation with STBC has been proposed in this paper. In this paper a novel detection algorithm for spatial modulation (SM) based on different receiving algorithm; ZF (Zero Forcing), MMSE (minimum mean-square error), and Sphere Decoder is proposed. The aim is to reduce the receiver complexity of the existing optimal decoder while maintaining an optimum performance.

Keywords - Spatial Modulation (SM), Zero Forcing (ZF), MMSE, Sphere decoder.