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论文

STBC和VBLAST相结合的MIMO系统

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摘要
STBC编码是基于发端分集的传输方案,VBLAST是基于空间复用的传输方案;基于两种方案的MIMO 系统,在空间相关信道下系统的性能都会下降,但前者的性能会明显好于后者;该文提出一种折衷方案,将发射天线阵列分组,每组内采用STBC编码,接收端采用VBLAST算法。仿真结果表明:在空间相关信道下,该方案的误码率性能明显优于通常的VBLAST接收机。

关键词 STBC VBLAST 多入多出（MIMO） 信道相关性

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MIMO System Combining Space-Time Block Codes and VBLAST

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Abstract
Space-Time Block Codes (STBC) is a scheme based on diversity-oriented transmission while VBLAST is another scheme based on spatial multiplexing; The performances of the two different MIMO systems are both degraded in correlated channels, however the performance of the former is better than the later. This paper proposes a trade-off scheme that the transmit antennas are divided into group meantime space-time block codes are applied to the different groups, VBLAST algorithm is used in the receiver. Simulation results show that performance of proposed scheme greatly gains over the VBLAST.

Key words STBC VBLAST MIMO Channel correlation

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