Abstract

Many techniques are used in MIMO for various purposes, such as SM (spatial multiplexing), SD (spatial diversity) and antenna beam forming. Among them spatial multiplexing is used in MIMO for accommodating high data-rates applications. In, SM, independent information sequences called as layers are simultaneously transmitted from independent antennas. So, the overall bit-rate compared to single antenna system is thus largely enhanced without requiring extra bandwidth or extra transmission power. However during transmission through channel, individual layers are overlying with each other and MSI (multi stream interference) will occurs at the receiver. So, it is very difficult to obtain intended symbol from the bunch of streams. To solve out this problem of MSI various approaches have been proposed, which provides efficient approximate solution of the detection problem at receiver. Such as zero forcing (ZF), minimum mean square error (MMSE), successive interference cancellation (SIC), Ordered successive interference cancellation (OSIC). In this paper error performance of these SM detection schemes are investigated. They are compared on the basis of their BER performance.
References

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Index Terms

Computer Science

Circuits and Systems

Keywords

ZF, MIMO, MMSE, OSIC, QAM.