SPACE TIME BLOCK USING DIFFERENT MODULATION TECHNIQUES

NEETU GUPTA & AMANDEEP KAUR

Assistant Professor, GIMET, Amritsar, Punjab, India

ABSTRACT

Space-time block codes are used for MIMO systems to enable the transmission of multiple copies of a data stream across a number of antennas and to exploit the various received versions of the data to improve the reliability of data-transfer. Space-time coding combines all the copies of the received signal in an optimal way to extract as much information from each of them as possible. However, wireless devices are range and data rate limited. The MIMO Alamouti scheme is an ingenious transmit diversity scheme for two transmit antennas that does not require transmit channel knowledge. Maximum likelihood decoding is achieved in a simple way through decoupling of the signals transmitted from different antennas rather than joint detection. In this paper, we have evaluated the performance of space time block codes with increased order of pseudo random number generator using different modulation techniques, for which the results have been verified through Matlab simulations.

KEYWORDS: Rayleigh Fading Channel, Higher Order STBC Codes, MIMO