

# A Novel Approach for Channel Capacity Estimation of MIMO-OFDM using Water Filling Algorithm

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*Abstract—* This paper describes water filling algorithm which has been used for allocating the power to the MIMO channels so as to enhance the capacity of the MIMO network. Here we present a theoretical framework for allocating the power using 4x4 MIMO-OFDM system using Flat-fading channel. Different modulation technique is implemented under Nakagami channel, Rician and Rayleigh channel and BER performance is evaluated.

*Keywords-* BER, Nakagami channel, MIMO, OFDM, Rayleigh channel, Rician channel, Water Filling.