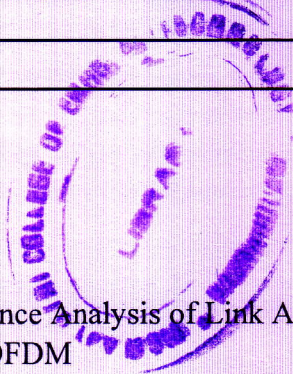


INTERNATIONAL JOURNAL OF NEURAL NETWORKS AND APPLICATIONS

VOLUME 17

NUMBER 1

Jan.-June, 2024



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INTRODUCTION

Multiple Antenna Communication is the main focus in research of the wireless systems. MIMO Technology is used to increase the capacity of the system. The effects of multipath fading can be reduced to increase the link capacity. MIMO system uses the number of Transmitter and Receiver antennas which exploit the multipath propagation in environment. Link adaptation MIMO can be suggested as a solution to increase spectral efficiency without adding bandwidth or transmission power. OFDM by the MIMO channel (MIMO-OFDM) is again to consider for increasing the link capacity. OFDM-OFDM can add the system capacity [1].

The 4G and 5G wireless communication systems guarantee high data rates with low complexity as it offers communication over limited bandwidth. OFDM is a powerful technique for a high data rate wireless communication. OFDM transforms the frequency resource domain into a big set of the individual frequency subcarriers which are orthogonal to each other. OFDM requires a channel with a flat frequency response of each channel when the rate of transmission is high enough to make the whole channel frequency selective. Therefore, a MIMO system using OFDM, known as MIMO-OFDM, is a promising high data rate and efficient. However, the design of multiple antennas OFDM systems has been a challenge for spatial multiplexing [2].