APPENDIX A

The proposed code construction methods are analyzed for the LDPC decoder of (3, 6, 648) and its decoding performances are evaluated. As an additional contribution towards this research work, the analysis of the stochastic based LDPC decoder for the code length of 1008 is also presented in the following Figure A.1.

![Figure A.1 Decoding Performance of the Stochastic Decoder for the Code length of 1008](image)

From the above graph, the improvement in the decoding performance of the LDPC decoder can be observed with the inclusion of the suggested algorithmic variations of this research work.
APPENDIX B

With the three different parity check matrix structures, suggested in this research work, the performance of the decoder in one of the other kind of channel (Rayleigh fading) is also analyzed. The analysis considers the Hierarchically Diagonal Parity Check Matrix (HDPCM) for the decoder of (3, 6, 648), which is presented in the following Figure A.2.

Figure A.2 Decoding Performance of the HDPCM based LDPC Decoder for Rayleigh Fading Channel

Nominal reduction in the Bit Error Rate of the decoder is observed over the range of SNR. The impact of the proposed algorithmic variation is also studied for the other kind of channel with this graph.