

**REDUCTION OF PAPR IN MIMO OFDMA SYSTEM BY  
USING DAOUD TECHNIQUE LDPC CODES**

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## ABSTRACT

MIMO-OFDMA offers significant high data rates transfer without increasing the bandwidth or transmit power. By adopting diversity coding such as Space Time coding (STC), Space Frequency Coding (SFC), Space Time Frequency Base Coding (STFBC), the major challenge of transmitting information over a long distances can be improved in terms of reliability and security of the data due to ISI and ICI. Low Density Parity Check which is introduced by Gallager in 1962 has attracted much attention to the needs of efficient and reliable coding theory in digital data communication system. In this paper together with STFBC, the simulation of LDPC under 4, 16 and 64 QAM is conducted in 2x2 MIMO-OFDMA over Additive White Gaussian Noise (AWGN) and Raleigh fading channel. The propose system is analyzed based on PAPR and BER with signal to noise ratio (SNR). The simulation using Matlab, shows the PAPR comparison, which Daoud LDPC works better in Rayleigh fading channel while in digital modulations the system outperforms with 64-QAM . The performance of LDPC between conventional LDPC and Daoud LDPC are being compared and it is further prove that with STFBC diversity Daoud LDPC achieved a slight improvement in MIMO OFDMA[1].

# TABLE OF CONTENTS

|                              |            |
|------------------------------|------------|
| <b>DECLARATION</b>           | <b>i</b>   |
| <b>ACKNOWLEDGEMENT</b>       | <b>iii</b> |
| <b>ABSTRACT</b>              | <b>iv</b>  |
| <b>TABLES OF CONTENTS</b>    | <b>v</b>   |
| <b>LIST OF FIGURES</b>       | <b>vii</b> |
| <b>LIST OF TABLES</b>        | <b>ix</b>  |
| <b>LIST OF ABBREVIATIONS</b> | <b>x</b>   |

## **CHAPTER**

### **1 INTRODUCTION**

|     |                       |   |
|-----|-----------------------|---|
| 1.0 | CHAPTER OVERVIEW      | 1 |
| 1.1 | OVERVIEW              | 1 |
| 1.2 | PROBLEM STATEMENT     | 3 |
| 1.3 | OBJECTIVES            | 3 |
| 1.4 | SCOPE OF THE RESEARCH | 4 |
| 1.5 | THESIS STRUCTURE      | 4 |

### **2 LITERATURE REVIEW**

|     |   |    |
|-----|---|----|
| 2.0 | CHAPTER OVERVIEW                            | 6  |
| 2.1 | MIMO SYSTEM                                 | 6  |
| 2.2 | OFDM BASIC SYSTEM                           | 8  |
| 2.3 | ADVANTAGES AND DISADVANTAGES OF OFDMA       | 13 |
| 2.4 | MIMO OFDMA SYSTEM                           | 14 |
| 2.5 | DIGITAL MODULATION                          | 19 |
| 2.6 | SPACE TIME FREQUENCY BLOCK CODING           | 21 |
|     | 2.6.1 JAKE'S MODEL                          | 21 |
|     | 2.6.2 DENT MODEL                            | 23 |
| 2.7 | PEAK TO AVERAGE POWER RATIO IN OFDMA SYSTEM | 25 |
| 2.8 | LOW DENSITY PARITY CHECK CODES              | 26 |

|          |   |    |
|----------|---|----|
| <b>3</b> | <b>METHODOLOGY</b>                            |    |
| 3.0      | CHAPTER OVERVIEW                              | 30 |
| 3.1      | FLOWCHART                                     | 30 |
| 3.2      | LDPC DAOUD TECHNIQUE                          | 35 |
| 3.3      | STFBC SYSTEM STRUCTURE                        | 41 |
|          | 3.3.3 OFDMA PARAMETER                         | 42 |
| <b>4</b> | <b>RESULTS AND DISCUSSIONS</b>                |    |
| 4.0      | CHAPTER OVERVIEW                              | 43 |
| 4.1      | SIMULATION OF DAOUD LDPC CODES IN MIMO OFDMA  | 43 |
| 4.2      | PERFORMANCE                                   | 43 |
|          | 4.2.1 PERFORMANCE OF PAPR                     | 44 |
|          | 4.2.2 PERFORMANCE OF BER                      | 48 |
| <b>5</b> | <b>CONCLUSIONS AND FUTURE RECOMMENDATIONS</b> |    |
| 5.0      | CHAPTER OVERVIEW                              | 50 |
| 5.1      | CONCLUSIONS                                   | 50 |
| 5.2      | FUTURE RECOMMENDATIONS                        | 51 |
|          | <b>REFERENCES</b>                             | 53 |
|          | <b>APPENDIX</b>                               | 55 |