LIST OF FIGURES

Figure 2. 1 Taxonomy Diagram [1]	
Figure 2. 2 CR Architecture [4]	9
Figure 2. 3 CR Physical Architecture [4]	. 10
Figure 2. 4 Cognitive cycle [6]	.11
Figure 2. 5 Multiband channel illustration scheme [8]	.12
Figure 2. 6 Energy Detection Model	.18
Figure 3. 1 General Research Flow	.21
Figure 3. 2 Wideband channel with N _c number [1]	. 22
Figure 3. 3 General model of spectrum sensing	. 22
Figure 3. 4 Sensing Model with CS	. 23
Figure 3. 5 Cognitive Radio Cycle	. 24
Figure 3. 6 Illustration of Cognitive Radio [1]	. 25
Figure 3. 7 CS Process	. 25
Figure 3. 8 Compressive sensing measurement process	. 26
Figure 3. 9 CS integration process on CR	. 26
Figure 3. 10 Block CVX Programming	. 28
Figure 3. 11 Process Simulation of CR	. 28
Figure 3. 12 Detection process in CR	. 29
Figure 4. 1 Effect of Noise Against MSE	.33
Figure 4. 2 Comparison between (a) signal with noise and (b) signal without noise	.33
Figure 4. 3 Effect of Changes in Compression Ratio	. 34
Figure 4. 4 Comparison of Output Signals against Compression Ratio	. 35
Figure 4. 5 Effect of Changes in SNR	.36
Figure 4. 6 Comparison of Output Signals against SNR Variations	.37
Figure 4. 7 Effect of Changes in Sparsity	.38
Figure 4. 8 The Relation Curve of P _d and P _{fa}	. 39
Figure 4. 9 The Relation Curve of Probability of Detection and SNR ($Pf = 0.05$)	.40
Figure 4. 10 The Relation Curve of Probability of Detection and SNR ($Pf = 0.1$)	.40
Figure 4. 11 The Relation Curve of Probability of Detection and SNR (Pf = 0.6)	.41
Figure 4. 12 The Relation Curve of Probability Detection and Compression Ratio	.42