

## CONTENTS

<b>APPROVAL PAGE .....</b>	<b>ii</b>
<b>ABSTRACT.....</b>	<b>iii</b>
<b>CONTENTS.....</b>	<b>vi</b>
<b>LIST OF FIGURES .....</b>	<b>vii</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>CHAPTER 1 INTRODUCTION .....</b>	<b>1</b>
1.1    Background.....	1
1.2    Problem Identification.....	3
1.3    Objective .....	3
1.4    Scope of Work .....	4
1.5    Research Methodology .....	4
1.6    Hypothesis.....	4
1.7    Stucture of Thesis .....	4
<b>CHAPTER II BASIC CONCEPTS.....</b>	<b>6</b>
2.1    RADAR SYSTEM.....	6
2.2    Small Displacement Detection Method .....	8
2.3    Implementation of SDR-Based Radar Systems .....	9
2.4 <i>Multi-Frequency Continous Wave (MFCW)</i> .....	10
2.5 <i>State of the Art Penelitian</i> .....	17
<b>CHAPTER II RESEARCH METHODOLOGY.....</b>	<b>23</b>
3.1    Simulation Model.....	23
3.2    Models of Laboratory Experiment Using VNA .....	26
3.3    Models of Laboratory Experiment Using SDR.....	28
<b>CHAPTER IV.....</b>	<b>31</b>
<b>RESULTS AND ANALYSIS .....</b>	<b>31</b>
4.1 <i>MFCW Simulation Model Results</i> .....	31
4.2 <i>Laboratory Experiment Results Using SDR</i> .....	45
<b>CHAPTER V .....</b>	<b>50</b>
<b>CONCLUSION .....</b>	<b>50</b>
<b>REFERENCE.....</b>	<b>52</b>