

# Contents

<b>Chapters</b>	<b>Page</b>
<b>1. Introduction</b> . . . . .	1-6
1.1. Information Security . . . . .	1-2
1.2. Hard Security Measure and shortfalls . . . . .	3
1.3. Trust and Reputation as Alternative . . . . .	3-5
1.4. Goals Achieved . . . . .	5
1.5. Organization of the Thesis . . . . .	6
<b>2. Literature Survey</b> . . . . .	7-22
2.1. Trust and reputation . . . . .	7
2.1.1. Trust . . . . .	8-9
2.1.2. Reputation . . . . .	10-11
2.1.3. Trust Vs Reputation . . . . .	11
2.1.4. Properties of Trust and Reputation . . . . .	12
2.1.5. Trust values . . . . .	13
2.2. An Overview of Trust Model . . . . .	13-17
2.2.1. Components of Trust Model . . . . .	14-17
2.2.2. Trust Models . . . . .	17-22
<b>3. Related Works</b> . . . . .	23-24
<b>4. Problem Definition and Algorithm</b> . . . . .	25-42
4.1. Model Foundation . . . . .	25-30
4.1.1. Main Social Actors . . . . .	25-26
4.1.2. Information Sources . . . . .	26
4.2. The Proposed Model . . . . .	26 -43
4.2.1. Definitions . . . . .	27
4.2.2. Value of trust and reputation . . . . .	28
4.2.3. Categorization of intermediaries . . . . .	28-29

4.2.4. Relationship among agents . . . . .	29-30
4.2.5. Proposed Model . . . . .	31-42
A. Estimation of Direct Trust . . . . .	31-32
B. Estimation of Recommended Trust . . . . .	32-34
C. Prediction Mechanism . . . . .	35
a. Generation of direct/recommended Trust Time Series ..	35
b. Regimes Extraction and Expert Training . . . . .	36-38
c. Course Grained Markov Chain Model . . . . .	38-41
d. Prediction of Trust . . . . .	41-42
<b>5. Implementation and Result . . . . .</b>	<b>44-54</b>
5.1 Implementation . . . . .	44
5.1.1 Data generation. . . . .	44-45
5.1.2 Coordinate Embedding and Markov Modeling . . . . .	45-46
5.1.3 Prediction . . . . .	46-47
5.2 Results. . . . .	47-54
<b>6. Conclusion and Future Work . . . . .</b>	<b>55</b>
6.1. Conclusion . . . . .	55
6.2. Future Work . . . . .	55

**Bibliography**