

SECURE DATA STRUCTURES AND THEIR APPLICATIONS

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL  
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To Julia

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Abstract of Dissertation Presented to the Graduate School  
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## CHAPTER 1 INTRODUCTION

TODO!

## CHAPTER 2 BACKGROUND

TODO!

## CHAPTER 3

### COMPACT FREQUENCY ESTIMATORS IN ADVERSARIAL ENVIRONMENTS

TODO!

CHAPTER 4  
PROBABILISTIC DATA STRUCTURES IN THE WILD: A SECURITY ANALYSIS OF REDIS

TODO!

CHAPTER 5  
PROVABLY ROBUST SKIPPING-BASED PROBABILISTIC DATA STRUCTURES

TODO!

CHAPTER 6  
COMPACT, VERIFIABLE, AND PRIVATE DATA STRUCTURES

TODO!

## CHAPTER 7

### CONCLUSION AND FUTURE WORK

TODO!

## BIOGRAPHICAL SKETCH

- Nmae plus Research interests
- PhD at UF
- UConn – BS + Goldwater Scholar
- Proof trading