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DOCTOR OF PHILOSOPHY

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by
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ABSTRACT

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This book could not have been written without Dr. Xiaojiang Du, who encouraged and challenged me through my academic program. He never accepted less than my best efforts. Thank you. What is written in this book are materials that I found in my papers. A special thanks to the authors mentioned in the bibliography page. I would like to acknowledge and extend my heartfelt gratitude to another advisor of mine –Dr. Shan Lin. Most especially to my family, friends and my son, Peiheng Ni. Words alone cannot express what I owe them for their encouragement and whose patient love enabled me to complete this book. A special thanks to Jie Wu for comments on my editing. The book was developed from ideas originally published in the Globecom 2010, Infocom 2011 and As always it was editor Xuemin (Sherman) Shen who provided the shelter conditions under which the work could take place: thanks to him for this and many other things.

Words.

TABLE OF CONTENTS

Page

ABSTRACT ii

ACKNOWLEDGEMENTS iii

DEDICATION iv

LIST OF FIGURES viii

LIST OF TABLES ix

LIST OF ABBREVIATIONS x

CHAPTER

1. INTRODUCTION 1

    1.1 Start Here 1

        1.1.1 More Here 1

        1.1.2 And Again 1

    1.2 Restart! 1

2. LITERATURE REVIEW 2

    2.1 Start Here 2

        2.1.1 More Here 2

        2.1.2 And Again 2

    2.2 Restart! 2

3. A UNIFIED SECURE FRAMEWORK FOR WIRELESS MEDICAL DEVICES USING PATIENT'S CELL PHONE 3

    3.1 Start Here 3

        3.1.1 More Here 3

        3.1.2 And Again 3

    3.2 Restart! 3

4. NEAR FIELD COMMUNICATION BASED ACCESS CONTROL FOR WIRELESS MEDICAL DEVICES 4

4.1 Start Here 4

4.1.1 More Here 4

4.1.2 And Again 4

4.2 Restart! 4

5. A PATIENT ACCESS PATTERN BASED ACCESS CONTROL SCHEME 5

5.1 Start Here 5

5.1.1 More Here 5

5.1.2 And Again 5

5.2 Restart! 5

6. PATIENT INFUSION PATTERN BASED ACCESS CONTROL SCHEMES FOR WIRELESS INSULIN PUMP SYSTEM 6

6.1 Start Here 6

6.1.1 More Here 6

6.1.2 And Again 6

6.2 Restart! 6

7. BIOMETRICS BASED TWO-LEVEL SECURE ACCESS CONTROL FOR IMPLANTABLE MEDICAL DEVICES DURING EMERGENCIES 7

7.1 Start Here 7

7.1.1 More Here 7

7.1.2 And Again 7

7.2 Restart! 7

8. CONCLUSION 8

8.1 Start Here 8

8.1.1 More Here 8

8.1.2 And Again 8

8.2 Restart! 8
BIBLIOGRAPHY 9

APPENDICES

A.1 Start Here 11
A.1.1 More Here 11
A.1.2 And Again 11
A.2 Restart! 11

LIST OF FIGURES

Figure Page

LIST OF TABLES

Table Page

LIST OF ABBREVIATIONS

Chapter 1

INTRODUCTION

1.1 Start Here

1.1.1 More Here

1.1.2 And Again

1.2 Restart!

Chapter 2

LITERATURE REVIEW

2.1 Start Here

2.1.1 More Here

2.1.2 And Again

2.2 Restart!

Chapter 3

A UNIFIED SECURE FRAMEWORK FOR WIRELESS MEDICAL DEVICES USING PATIENT'S CELL PHONE

3.1 Start Here

3.1.1 More Here

3.1.2 And Again

3.2 Restart!

Chapter 4

NEAR FIELD COMMUNICATION BASED ACCESS CONTROL FOR WIRELESS MEDICAL DEVICES

4.1 Start Here

4.1.1 More Here

4.1.2 And Again

4.2 Restart!

Chapter 5

A PATIENT ACCESS PATTERN BASED ACCESS CONTROL SCHEME

5.1 Start Here

5.1.1 More Here

5.1.2 And Again

5.2 Restart!

Chapter 6

PATIENT INFUSION PATTERN BASED ACCESS CONTROL SCHEMES FOR WIRELESS INSULIN PUMP SYSTEM

6.1 Start Here

6.1.1 More Here

6.1.2 And Again

6.2 Restart!

Chapter 7

BIOMETRICS BASED TWO-LEVEL SECURE ACCESS CONTROL FOR IMPLANTABLE MEDICAL DEVICES DURING EMERGENCIES

7.1 Start Here

7.1.1 More Here

7.1.2 And Again

7.2 Restart!

Chapter 8

CONCLUSION

8.1 Start Here

8.1.1 More Here

8.1.2 And Again

8.2 Restart!

BIBLIOGRAPHY

BIBLIOGRAPHY

Halperin, D., Heydt-Benjamin, T. S., Fu, K., Kohno, T., & Maisel, W. H. (2008, Jan.-Mar.). Security and privacy for implantable medical devices. *IEEE Pervasive Computing*, *7*, 30-39.

Hei, X., Du, X., Wu, J., & Hu, F. (2010). Defending resource depletion attacks on implantable medical devices. In *Proc. of the ieee globecom 2010* (p. 1-5).

Juels, A. (2006, Feburary). Rfid security and privacy: a research survey. *IEEE JSAC*, *24*, 381-394.

Malasri, K., & Wang, L. (2009, July). Securing wireless implantable devices for healthcare: ideas and challenges. *IEEE Communications*, *47*, 74-80.

Mica2 mote sensor. (n.d.).

Raymond, D. (2006). Effects of denial of sleep attacks on wireless sensor network mac protocols. In *Proc. of the 7th ann. ieee systems, man, and cybernetics, information assurance workshop* (p. 297-304).

Raymond, D., & Midkiff, S. (2008, Jan.-Mar.). Denial-of-service in wireless sensor networks: attacks and defenses. *IEEE Pervasive Computering*, *7*, 74-81.

Sun, J., Zhu, X., Zhang, C., & Fang, Y. (2011). Hcpp: Cryptography based secure ehr system for patient privacy and emergency healthcare. In *Proc. of icdcs'11* (p. 373-382).

APPENDIX A

Appendix A

A.1 Start Here

A.1.1 More Here

A.1.2 And Again

A.2 Restart!