CONTENTS

Preface	vii
Yang Xiao, Xuemin Shen, and Ding-Zhu Du	
Part I: Security in General Wireless/Mobile Networks	1
Chapter 1: High Performance Elliptic Curve Cryptographic Co-processor Jonathan Lutz and M. Anwarul Hasan	3
Chapter 2: An Adaptive Encryption Protocol in Mobile Computing Hanping Lufei and Weisong Shi	43
Part II: Security in Ad Hoc Network	63
Chapter 3: Pre-Authentication and Authentication Models in	
Ad Hoc Networks	65
Katrin Hoeper and Guang Gong	
Chapter 4: Promoting Identity-Based Key Management in	
Wireless Ad Hoc Networks	83
Jianping Pan, Lin Cai, and Xuemin (Sherman) Shen	
Chapter 5: A Survey of Attacks and Countermeasures in	
Mobile Ad Hoc Networks	103
Bing Wu, Jianmin Chen, Jie Wu, and Mihaela Cardei	
Chapter 6: Secure Routing in Wireless Ad-Hoc Networks	137
Venkata C. Giruka and Mukesh Singhal	

vi TABLE OF CONTENTS

Chapter 7: A Survey on Intrusion Detection in Mobile Ad Hoc Networks	150
Tiranuch Anantvalee and Jie Wu	159
Part III: Security in Mobile Cellular Networks	181
are 111. Security in Woodle Centual Networks	101
Chapter 8: Intrusion Detection in Cellular Mobile Networks Bo Sun, Yang Xiao, and Kui Wu	183
Chapter 9: The Spread of Epidemics on Smartphones	211
Bo Zheng, Yongqiang Xiong, Qian Zhang, and Chuang Lin	
Part IV: Security in Wireless LANs	243
Chapter 10: Cross-Domain Mobility-Adaptive Authentication Hahnsang Kim and Kang G. Shin	245
Chapter 11: AAA Architecture and Authentication	
for Wireless LAN Roaming Minghui Shi, Humphrey Rutagemwa, Xuemin (Sherman) Shen,	273
Jon W. Mark, Yixin Jiang, and Chuang Lin	
Chapter 12: An Experimental Study on Security Protocols in WLANs Avesh Kumar Agarwal and Wenye Wang	295
Part V: Security in Sensor Networks	323
Chapter 13: Security Issues in Wireless Sensor Networks used in Clinical Information Systems Jelena Mišić and Vojislav B. Mišić	325
Chapter 14: Key Management Schemes in Sensor Networks Venkata Krishna Rayi, Yang Xiao, Bo Sun, Xiaojiang (James) Du, and Fei Hu	341
Chapter 15: Secure Routing in Ad Hoc and Sensor Networks Xu (Kevin) Su, Yang Xiao, and Rajendra V. Boppana	381
About the Editors	403
Index	407