

## Contents

|  |            |
|--|------------|
| Preface.....   | v          |
| <b>Part 1: Authentication and Confidentiality</b>  | <b>1</b>   |
| Chapter 1 Authentication and Confidentiality in Wireless<br>Ad Hoc Networks.....                     | 3          |
| <i>Anjum Naveed and Salil Kanhere</i>  |            |
| Chapter 2 Key Distribution.....  | 29         |
| <i>Mahalingam Ramkumar</i>   |            |
| Chapter 3 Key Pre-Distribution for Sensor Networks Using<br>Group Deployment Knowledge .....         | 67         |
| <i>Donggang Liu, Peng Ning and Wenliang Du</i>   |            |
| <b>Part 2: Privacy</b>   | <b>103</b> |
| Chapter 4 Location Privacy .....   | 105        |
| <i>Sergio Armenia, Laura Galluccio, Alessandro Leonardi,<br/>Giacomo Morabito and Sergio Palazzo</i> |            |
| Chapter 5 On-Demand Anonymous Routing (ODAR).....  | 137        |
| <i>Lichun Bao, Rex Chen and Denh Sy</i>  |            |
| Chapter 6 NTRU-Based Confidential Data Transmission in<br>Telemedicine Sensor Networks.....          | 159        |
| <i>Fei Hu, Xiaojun Cao, Kyle Wilhelm,<br/>Marcin Łukowiak and Stanisław Radziszowski</i>             |            |

|   |  |
|---|--|
| <b>Part 3: Reliability</b>                          | <b>193</b>   |
| Chapter 7   | Fault-Tolerant Wireless Sensor Networks ..... 195<br><i>Xiaoyuan Sherry Li and Janise McNair</i>   |
| Chapter 8   | Detecting Data Anomalies in Wireless Sensor<br>Networks ..... 231<br><i>Sutharshan Rajasegarar, Christopher Leckie and<br/>Marimuthu Palaniswami</i> |
| Chapter 9   | Reliable Traffic Information Propagation in<br>Vehicular Ad Hoc Networks ..... 261<br><i>Soyoung Park, Cliff Zou and Damla Turgut</i>                |
| <b>Part 4: Network Management and Configuration</b> | <b>293</b>   |
| Chapter 10  | Energy Efficient Network Security Management ..... 295<br><i>Sherry Wang, Harold Zheng and Wenye Wang</i>  |
| Chapter 11  | Wireless Sensor Network Authorization Specification<br>Language: The Formal Models ..... 333<br><i>David Marsh, Rusty Baldwin and Barry Mullins</i>  |
| Chapter 12  | Dynamic Program Update in Wireless Sensor<br>Networks ..... 369<br><i>Manik Lal Das and Aakash Joshi</i>   |
| Chapter 13  | Stabilizing Reconfiguration in Wireless Sensor<br>Networks ..... 385<br><i>Sandip Bapat and Anish Arora</i>  |