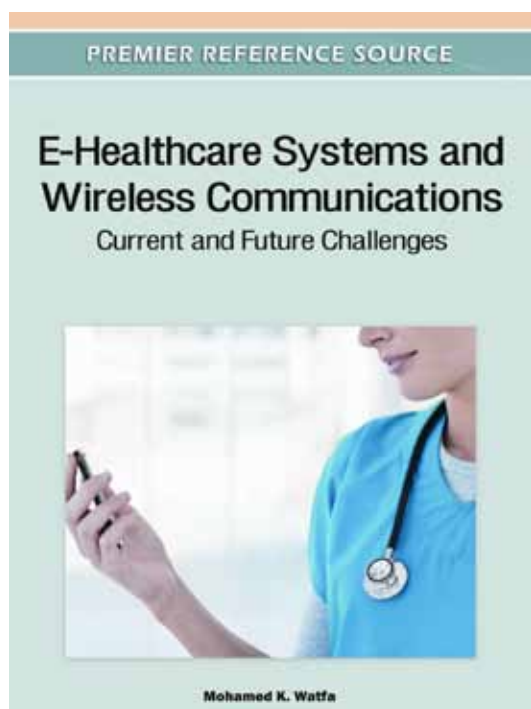


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## E-Healthcare Systems and Wireless Communications: Current and Future Challenges



Mohamed K. Watfa (University of Wollongong, UAE)

There has been a dramatic increase in the utilization of wireless technologies in healthcare systems as a consequence of the wireless ubiquitous and pervasive communications revolution. Emerging information and wireless communication technologies in health and healthcare have led to the creation of e-health systems, also known as e-healthcare, which have been drawing increasing attention in the public and have gained strong support from government agencies and various organizations.

**E-Healthcare Systems and Wireless Communications: Current and Future Challenges** explores the developments and challenges associated with the successful deployment of e-healthcare systems. The book combines research efforts in different disciplines including pervasive wireless communications, wearable computing, context-awareness, sensor data fusion, artificial intelligence, neural networks, expert systems, databases, and security. This work serves as a comprehensive reference for graduate students in bioengineering and also provides solutions for medical researchers who are faced with the challenge of designing and implementing a cost-effective pervasive and ubiquitous wireless communication system.

### Topics Covered:

- Autonomic Sensor Networks for Healthcare
- Cyber Physical Systems for Patient Monitoring
- E-Surgery Using Large Bandwidth Connections
- Home Monitoring and Ambient Assisted Applications
- Middleware for E-Health
- RFID Applications in E Healthcare
- Wearable and Implantable Sensors for Healthcare
- Wireless Body Area Networks
- Wireless Communications in Healthcare
- Wireless Sensor Networks for Healthcare

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**Dr. Mohamed K. Watfa** is currently an Associate Professor in the Faculty of Computer Science and Engineering at the University of Wollongong, Dubai. Before that he was an Assistant Professor at the American University of Beirut for two years (2006-2008). He received his PhD from the School of Electrical and Computer Engineering at the University of Oklahoma in Norman, OK, in early 2006. He obtained his BS in Computer Science from American University of Beirut in 2002 and his Masters degree in Engineering Science from the University of Toledo, OH, in 2003. He was one of the youngest PhD holders to graduate from his university at the age of 24. He was also on the dean's honors list and was given a number of prestigious awards. His research interests include sensor networks, intelligent systems, wireless networking, software engineering, resource management, energy issues, tracking, routing, and performance measures. He is the author of a number of published books, the guest editor of a number of international journals, and the organizer of a number of international conferences. He also held a position as a lead network engineer at different networking companies. He is also a member of the ACM and IEEE. He has more than forty journal and conference publications.



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## Section 1: Introduction to E-Healthcare Systems

### Chapter 1

*Challenges of Mobile Health Applications in Developing Countries*

Yadav Nikhil (University of Notre Dame, USA)

Poellabauer Christian (University of Notre Dame, USA)

### Chapter 2

*Legal Issues in E-healthcare Systems*

Sarabdeen Jawahitha (University of Wollongong in Dubai, UAE)

### Chapter 3

*Healthcare Applications for Clinicians*

Wafaa Mohamed K. (University of Wollongong in Dubai, UAE)

Majeed Hina (University of Wollongong in Dubai, UAE)

Salahuddin Tooba (University of Wollongong in Dubai, UAE)

### Chapter 4

*RFID Applications in E-Healthcare*

Wafaa Mohamed K. (University of Wollongong in Dubai, UAE)

Kaur Manprabhjot (University of Wollongong Dubai, UAE)

Daruwala Rashida Firoz (University of Wollongong Dubai, UAE)

## Section 2: Security and Privacy Issues in E-Healthcare Systems

### Chapter 5

*Security and Privacy in Body Sensor Networks*

Itani Wassim (American University of Beirut, Lebanon)

Kayssi Ayman (American University of Beirut, Lebanon)

Chehab Ali (American University of Beirut, Lebanon)

### Chapter 6

*Is Your Automated Healthcare Information Secure?*

Zineddine Mhamed (AlHosn University, UAE)

### Chapter 7

*Cyber Physical Security Solutions for Pervasive Health Monitoring Systems*

Venkatasubramanian Krishna K. (University of Pennsylvania, USA)

Nabar Sidharth (University of Washington, USA)

Gupta Sandeep K. S. (Arizona State University, USA)

Poovendran Radha (University of Washington, USA)

## Section 3: Real Life Efforts towards the Deployment of E-Healthcare Systems

### Chapter 8

*Android-Based Telemedicine System for Patient-Monitoring*

Matin M. A. (North South University, Bangladesh)

Rahman Riaz (North South University, Bangladesh)

### Chapter 9

*Rural E-Health Infrastructure Development*

Zalzala Ali (Hikma Group Ltd, UAE)

Chia Stanley (Vodafone Group R&D, USA)

Zalzala Laura (Bucharest Academy of Economic Studies, Romania)

Sahu Subrat (Pandit Deendayal Petroleum University, India)

Vaghasiya Suresh (Pandit Deendayal Petroleum University, India)

Karimi Ali (Trans Technology Group, USA)

### Chapter 10

*Design and Deployment of a Mobile-Based Medical Alert System*

Ikhu-Omoregbe N.A. (Covenant University, Ota, Nigeria)

Azeta A.A. (Covenant University, Ota, Nigeria)

### Chapter 11

*A Mobile Phone-Based Expert System for Disease Diagnosis*

Oyelami Olufemi Moses (Covenant University, Nigeria.)

### Chapter 12

*Portable Wireless Device for Automated Agitation Detection*

Sakr George E. (American University of Beirut, Lebanon)

Elhajj Imad H. (American University of Beirut, Lebanon)

Joujou Mohamad Khaled (American University of Beirut, Lebanon)

Abboud Sarah (American University of Beirut, Lebanon)

Huijer Huda Abu-Saad (American University of Beirut, Lebanon)

## Section 4: Open Research Challenges in E-Healthcare Systems

### Chapter 13

*Prioritization of Patient Vital Signs Transmission Using Wireless Body Area Networks*

Chen Baozhi (Rutgers University, USA)

Pompili Dario (Rutgers University, USA)

### Chapter 14

*Adapting Medical Content to the Terminal Capabilities of Wireless Devices*

Panagiotakis Spyros (Technological Educational Institution of Crete, Greece)

Agoutoglou Robert (Technological Educational Institution of Crete, Greece)

Vassilakis Kostas (Technological Educational Institution of Crete, Greece)

### Chapter 15

*Situation-Aware Ambient Assisted Living and Ambient Intelligence Data Integration for Efficient ElderCare*

Kurschl Werner (Upper Austria University of Applied Sciences, Austria)

Buchmayr Mario (Upper Austria University of Applied Sciences, Austria)

Franz Barbara (Upper Austria University of Applied Sciences, Austria)

Mayr Margit (Upper Austria University of Applied Sciences, Austria)

### Chapter 16

*Advanced Video Distribution for Wireless E-Healthcare Systems*

Zvikhachevskaya Anna (Lancaster University, UK)

Mihaylova Lyudmila (Lancaster University, UK)

### Chapter 17

*A Cooperative Routing Algorithm to Increase QoS in Wireless E-Healthcare Systems*

Manfredi Sabato (University of Naples FEDERICO II, Italy)

### Chapter 18

*Towards Achieving Semantic Interoperability In eHealth Services*

Taweel Adel (King's College London, UK)

Delaney Brendan (King's College London, UK)

Speedie Stuart (King's College London, UK)

### Chapter 19

*A Centralized Real-Time E-Healthcare System for Remote Detection and Prediction of Epileptic Seizures*

Pham Dung V. (The University of Melbourne, Australia)

Halgamuge Malka N. (The University of Melbourne, Australia)

Nirmalathas Thas (The University of Melbourne, Australia)

Moran Bill (The University of Melbourne, Australia)

### Chapter 20

*A Full-Body Wireless Wearable UWB-Based Human Motion Capture and Gait Analysis System*

Shaban Heba (Arab Academy for Science, Technology & Maritime Transport (AAS-TMT), Egypt)

Abou El-Nasr Mohamad (Arab Academy for Science, Technology & Maritime Transport (AAS-TMT), Egypt)

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