An Excellent Addition to Your Library!

Released: January 2013

Digital Advancements in Medicine, E-Health, and Communication Technologies

PREMIER REFERENCE SOURCE

Digital Advances in Medicine, E-Health, and Communication Technologies



Joel J.P.C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)

Digital Advancements in Medicine, E-Health, and Communication Technologies explores the developments and trends in medical informatics and its approaches toward telemedicine and e-health applications. This comprehensive collection of research brings together academia and industry by highlighting recent advances in electronic health, medical communications and applications for e-health and medicine.

Topics Covered:

- Biomedical and Biosensors Engineering
- E-Health
- Health and Healthcare Applications
- Information and Knowledge Managements

Tools

- Medical Communications
- Mobile Applications
- Wireless Sensor Networks

ISBN: 9781466627949; © 2013; 348 pp. Print: US \$245.00 | Perpetual: US \$370.00 | Print + Perpetual: US \$490.00

Pre-pub Discount:*

Print: US \$235.00 | Perpetual: US \$350.00 * Pre-pub price is good through one month after publication date.

> **Market:** This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Joel J.P.C. Rodrigues is a professor at the University of Beira Interior (Covilhã, Portugal) and researcher at the Instituto de Telecomunicações (Portugal). He is the leader of NetGNA Research Group (http://netgna.it.ubi.pt) and the founder and leader of the IEEE ComSoc CSIM Special Interest Group on modeling and simulation tools (http:// mst.it.ubi.pt). He is a member of the Steering Committee of IEEE ComSoc Technical Sub-Committee on e-health and the secretary of the IEEE ComSoc Technical Committee on Communications Software. He participates in several European networks of excellence and Portuguese research projects. He is the general chair of the IEEE International Workshop on medical applications networking (MAN). He has chaired several technical program committees from international conferences and participated in tens of TPCs. He has been guest editor of several journal special issues and belongs to numerous editorial review boards of international journals. He is a licensed professional engineer and member of the ACM SIGCOMM, the Internet Society, and a senior member of the IEEE Computer Society, IEEE Communications Society, and IEEE Education Society.



www.igi-global.com

Publishing Academic Excellence at the Pace of Technology Since 1988

Chapter 1

A Comprehensive Overview of Wireless Body Area Networks (WBAN) Bradai Nourchene (Sfax University, Tunisia) Chaari Lamia (Sfax University, Tunisia) Kamoun Lotfi (Sfax University, Tunisia)

Chapter 2

An Advanced and Secure Symbian-Based Mobile Approach for Body Sensor Networks Interaction Pereira Orlando R. E. (University of Beira Interior, Covilhã, Portugal) Caldeira João M. L. P. (Instituto de Telecomunicações, University of Beira Interior, Covilhã, Portugal and Polytechnic Institute of Castelo Branco, Portugal) Rodrigues Joel J. P. C. (Instituto de Telecomunicações, University of Beira Interior, Covilhã, Portugal)

Chapter 3

Pertusive Computing Support in the Transition towards Personalised Health Systems Serrano Martín (Waterford Institute of Technology, Ireland) Elmisery Ahmed (Waterford Institute of Technology, Ireland) Foghlú Mícheál Ó (Waterford Institute of Technology, Ireland) Donnelly Willie (Waterford Institute of Technology, Ireland) Storni Cristiano (University of Limerick, Ireland) Fernström Mikael (University of Limerick, Ireland)

Chapter 4

Study of Zero Velocity Update for Both Low- and High-Speed Human Activities Zhang R. (University of Freiburg, Germany) Loschonsky M. (University of Freiburg, Germany) Reindl L.M. (University of Freiburg, Germany)

Chapter 5

Applications of Policy Based Agents in Wireless Body Sensor Mesh Networks for Patient Health Monitoring Miller Kevin (University of West Indies, Jamaica) Sankaranarayanan Suresh (University of West Indies, Jamaica)

Chapter 6

Acquisition of Multiple Physiological Parameters During Physical Exercise Felizardo Virginie (University of Beira Interior, Portugal) Gaspar Pedro Dinis (University of Beira Interior, Portugal) Garcia Nuno M. (Lusophone University of Humanities and Technologies (ULHT) and Telecommunications Institute, Covilhã, Portugal) Reis Victor (Research Centre for Sports, Health & Human Development, Portugal)

Chapter 7

QoS Concepts and Architecture Over Wireless Body Area Networks for Healthcare Applications Chaari Lamia (Sfax University, Tunisia) Kamoun Lotfi (Sfax University, Tunisia)

Chapter 8

Improving Supervised Classification of Activities of Daily Living Using Prior Knowledge Fleury Anthony (University Lille Nord de France, France) Noury Norbert (University of Lyon, France) Vacher Michel (LIG Laboratory, France)

Chapter 9

Development of Audio Sensing Technology for Ambient Assisted Lining: Vacher Michel (Laboratoire d'Informatique de Grenoble, UMR CNRS/UJF/G-INP 5217, France) Portet François (Laboratoire d'Informatique de Grenoble, UMR CNRS/UJF/G-INP 5217, France) Fleury Anthony (University Lille Nord de France, France) Noury Norbert (University of Lyon, France)

Chapter 10

On the Use of Home Node Bs for Emergency Telemedicine Applications in Varions Indoor Environments Mutafungwa Edward (Aalto University School of Science and Technology, Finland) Zheng Zhong (Aalto University School of Science and Technology, Finland) Hämäläinen Jyri (Aalto University School of Science and Technology, Finland) Husso Mika (Aalto University School of Science and Technology, Finland) Korhonen Timo (Aalto University School of Science and Technology, Finland)

Chapter 11

Modeling Emergency and Telemedicine Health Support System: Yu Weider D. (San Jose State University, USA) Bhagwat Radhika (San Jose State University, USA)

Chapter 12

Discrete Portable Measuring Device for Monitoring Noninvasive Intraocular Pressure with a Nano-Structured Sensing Contact Lens Prototype Moya Ana (CIBER-BBN and IMB-CNM (CSIC), Spain) Guimerà Anton (CIBER-BBN and IMB-CNM (CSIC), Spain) Sánchez Irene (CIBER-BBN and IOBA, University of Valladolidad, Spain) Laukin Vladimir (ICREA and ICMAB (CSIC), Spain) Martín Raúl (CIBER-BBN, Department of Physics TAO and IOBA, University of Valladolid, Spain) Ussa Fernando (CIBER-BBN and IOBA, University of Valladolid, Spain) Laukhina Elena (CIBER-BBN and ICMAB (CSIC), Spain) Rovira Concepció (CIBER-BBN and ICMAB (CSIC), Spain) Rovira Concepció (CIBER-BBN and ICMAB (CSIC), Spain) Veciana Jaume (CIBER-BBN and ICMAB (CSIC), Spain) Pastor José Carlos (CIBER-BBN, University Hospital and IOBA, University of Valladolid, Spain) Villa Rosa (CIBER-BBN and IMB-CNM (CSIC), Spain) Aguiló Jordi (CIBER-BBN and IMB-CNM (CSIC), Spain)

Chapter 13

A Prototype Agent Based Model and Machine Learning Hybrid System for Healthcare Decision Support Laskowski Marek (University of Manitoba, Canada)

Chapter 14

Proposed Framework for the Deployment of Telemedicine Centers in Rural Bangladesh Mostafa Raqibul (United International University, Bangladesh) Hasan Gazi Mehedi (United International University, Bangladesh) Kabir A.M. Alomgir (United International University, Bangladesh) Rahman Md Atiqur (United International University, Bangladesh)

Chapter 15

Affordable System for Rapid Detection and Mitigation of Emerging Diseases Waidyanatha Nuwan (LIRNEasia, China) Dubrawski Artur (Carnegie Mellon University, USA) M. Ganesan (IIT/M's Rural Technology and Business Incubator, India) Gow Gordon (University of Alberta, Canada)

Chapter 16

Malaria Parasite Detection: Koppar Anant R. (PES Research Center, India) Sridhar Venugopalachar (P. E. S. College of Engineering, India)

Chapter 17

A Tool for Automatic Hammersmith Infant Neurological Examination Dogra Debi Prosad (Indian Institute of Technology Kharagpur, India) Nandam Karthik (Indian Institute of Technology Kharagpur, India) Majumdar Arun Kumar (Indian Institute of Technology Kharagpur, India) Sural Shamik (Indian Institute of Technology Kharagpur, India) Mukhopadhyay Jayanta (Indian Institute of Technology Kharagpur, India) Majumdar Bandana (Indian Institute of Technology Kharagpur, India) Majumdar Bandana (Indian Institute of Technology Kharagpur, India) Majumdar Bandana (Indian Institute of Technology Kharagpur, India) Mukherjee Suchandra (Institute of Post Graduate Medical Education & Research, S.S.K.M. Hospital, India) Hospital, India)

Chapter 18

Evaluating the IEEE 802.15.6 2.4GHz WBAN Proposal on Medical Multi-Parameter Monitoring under WiFi/Bluetooth Interference Wang Yufei (The Hong Kong Polytechnic University, Hong Kong) Wang Qixin (The Hong Kong Polytechnic University, Hong Kong)

Chapter 19

Expected Communications Technology to Track Avian Influenza and Related the Statement of Appeal by ITU-D SG2 Q14 Nakajima Isao (Tokai University School of Medicine, Japan) Kitano Toshihiko (Tokai University School of Medicine, Japan) Katayama Masaaki (Nagoya University, Japan) Androuchko Leonid (International University in Geneva, Switzerland)

Chapter 20

Design Considerations for Delivering E-Learning to Surgical Trainees Coughlan Jane (Brunel University, UK) Brinkman Willem-Paul (Delft University of Technology, The Netherlands)

Chapter 21 Research Essay: Hood Christopher C. (University of Oxford, UK) Bougourd Sarah (Nuffield Council on Bioethics, UK)

Order Your Copy Today!

Name:	Enclosed is check payable to IGI Global in
Organization:	US Dollars, drawn on a US-based bank
Address:	\Box Credit Card \Box Mastercard \Box Visa \Box Am. Express
City, State, Zip:	3 or 4 Digit Security Code:
Country:	Name on Card:
Tel:	Account #:
Fax:	Expiration Date:
E-mail:	