

Table of Contents

Preface	xiii
Section I	
Mobile Health Applications and Technologies	
Chapter I	
Evaluation of Two Mobile Nutrition Tracking Applications for Chronically Ill Populations with Low Literacy Skills	1
<i>Katie A. Siek, University of Colorado at Boulder, USA</i>	
<i>Kay H. Connelly, Indiana University, USA</i>	
<i>Beenish Chaudry, Indiana University, USA</i>	
<i>Desiree Lambert, Trilogy Health Services, USA</i>	
<i>Janet L. Welch, Indiana University School of Nursing, USA</i>	
Chapter II	
Accessing an Existing Virtual Electronic Patient Record with a Secure Wireless Architecture	24
<i>Ana Ferreira, Center for Informatics, Faculty of Medicine in Porto, Portugal</i>	
<i>Luís Barreto, Instituto Politécnico de Viana do Castelo, Portugal</i>	
<i>Pedro Brandão, LIACC at Faculty of Science in Porto, R. Campo Alegre, Portugal</i>	
<i>Ricardo Correia, Center for Informatics, Faculty of Medicine in Porto, Portugal</i>	
<i>Susana Sargento, Universidade de Aveiro, Portugal</i>	
<i>Luís Antunes, LIACC at Faculty of Science in Porto, R. Campo Alegre, Portugal</i>	
Chapter III	
Personal Health Records Systems Go Mobile: Defining Evaluation Components.....	45
<i>Phillip Olla, Madonna University, USA</i>	
<i>Joseph Tan, Wayne State University, USA</i>	
Chapter IV	
Medical Information Representation Framework for Mobile Healthcare	71
<i>Ing Widya, University of Twente, The Netherlands</i>	
<i>HaiLiang Mei, University of Twente, The Netherlands</i>	
<i>Bert-Jan van Beijnum, University of Twente, The Netherlands</i>	
<i>Jacqueline Wijsman, University of Twente, The Netherlands</i>	
<i>Hermie J. Hermens, University of Twente, The Netherlands</i>	

Chapter V	
A Distributed Approach of a Clinical Decision Support System Based on Cooperation	92
<i>Daniel Ruiz-Fernández, University of Alicante, Spain</i>	
<i>Antonio Soriano-Payá, University of Alicante, Spain</i>	
Chapter VI	
Managing Mobile Healthcare Knowledge: Physicians' Perceptions on Knowledge Creation and Reuse	111
<i>Teppo Räisänen, University of Oulu, Finland</i>	
<i>Harri Oinas-Kukkonen, University of Oulu, Finland</i>	
<i>Katja Leiviskä, University of Oulu, Finland</i>	
<i>Matti Seppänen, The Finnish Medical Society Duodecim, Finland</i>	
<i>Markku Kallio, The Finnish Medical Society Duodecim, Finland</i>	
 Section II	
Patient Monitoring and Wearable Devices	
Chapter VII	
Patient Monitoring in Diverse Environments	129
<i>Yousef Jasemian, Engineering College of Aarhus, Denmark</i>	
Chapter VIII	
Monitoring Hospital Patients Using Ambient Displays.....	143
<i>Monica Tentori, CICESE, Mexico</i>	
<i>Daniela Segura, CICESE, Mexico</i>	
<i>Jesus Favela, CICESE, Mexico</i>	
Chapter IX	
Towards Easy-to-Use, Safe, and Secure Wireless Medical Body Sensor Networks	159
<i>Javier Espina, Philips Research Europe, The Netherlands</i>	
<i>Heribert Baldus, Philips Research Europe, The Netherlands</i>	
<i>Thomas Falck, Philips Research Europe, The Netherlands</i>	
<i>Oscar Garcia, Philips Research Europe, The Netherlands</i>	
<i>Karin Klabunde, Philips Research Europe, The Netherlands</i>	
Chapter X	
Sensing of Vital Signs and Transmission Using Wireless Networks.....	180
<i>Yousef Jasemian, Engineering College of Aarhus, Denmark</i>	

Chapter XI

Towards Wearable Physiological Monitoring on a Mobile Phone..... 208

*Nuria Oliver, Telefonica Research, Spain**Fernando Flores-Mangas, University of Toronto, Canada**Rodrigo de Oliveira, State University of Campinas, Brazil***Section III
Context Aware Systems****Chapter XII**

A Framework for Capturing Patient Consent in Pervasive Healthcare Applications 245

*Giovanni Russello, Imperial College London, UK**Changyu Dong, Imperial College London, UK**Naranker Dually, Imperial College London, UK***Chapter XIII**

Technology Enablers for Context-Aware Healthcare Applications 260

*Filipe Meneses, Universidade do Minho, Portugal**Adriano Moreira, Universidade do Minho, Portugal***Chapter XIV**

Modeling Spatiotemporal Developments in Spatial Health Systems 270

*Bjorn Gottfried, University of Bremen, Germany***Chapter XV**

Context-Aware Task Distribution for Enhanced M-health Application Performance 285

*Hailiang Mei, University of Twente, The Netherlands**Bert-Jan van Beijnum, University of Twente, The Netherlands**Ing Widya, University of Twente, The Netherlands**Val Jones, University of Twente, The Netherlands**Hermie Hermens, , University of Twente, The Netherlands***Compilation of References** 308**About the Contributors** 332**Index.....** 341