Smart Healthcare Applications and Services: Developments and Practices

Carsten Röcker (RWTH Aachen University, Germany) and Martina Ziefle (RWTH Aachen University, Germany)

Within the last years a variety of new healthcare concepts for supporting and assisting users in technology-enhanced home environments emerged. These so-called “smart healthcare technologies” are characterized by a combined use of information and communication technologies and health monitoring devices in the home domain.

Smart Healthcare Applications and Services: Developments and Practices provides an in-depth introduction into medical, social, psychological, and technical aspects of smart healthcare applications as well as their consequences for the design, use and acceptance of future systems. The knowledge and insights provided in this book will help students as well as systems designers understand the fundamental social and technical requirements smart healthcare technologies have to meet.

Topics Covered:
• Adaptive and tangible user interfaces for e-health systems
• Ambient assisted living environments
• Handheld devices and mobile computing in e-health systems
• Human aspects of future and emerging healthcare technologies
• Model-based design of e-health systems
• Privacy, security, and trust in e-health applications
• Social and societal implications of e-health applications
• Software infrastructures and architectures for implementing e-health applications
• Technologies and devices for smart healthcare systems
• Usability of healthcare information systems

Print: US $245.00  |  Perpetual: US $385.00  |  Print + Perpetual: US $460.00

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.

Carsten Röcker is a senior researcher at the Human Technology Centre (HumTec) at RWTH Aachen University, working in the research program “eHealth - Enhancing Mobility with Aging.” As part of an interdisciplinary team of researchers he is designing healthcare applications for supporting elderly people in ubiquitous computing environments. Previously, Carsten was a visiting PostDoc at the Media Computing Group, focusing on the evaluation of user requirements for smart work environments. Before joining RWTH Aachen University in 2008, he was a PostDoc at the Distributed Cognition and HCI Laboratory at the University of California in San Diego. From 2000 to 2006 he worked as a research associate at the Fraunhofer Integrated Publication and Information Systems Institute (IPSI) in Darmstadt. During this time he was involved in several projects designing novel information and communication technologies for intelligent home and office environments. He has an interdisciplinary background with academic degrees in the areas computer science (PhD), psychology (PhD), electrical engineering (Master) and management (Master).
Enclosed is check payable to IGI Global in US Dollars, drawn on a US-based bank.

3 or 4 Digit Security Code: ___________________________________ _______

Name on Card: _________ ______________________ _ ______________ ______

Account #: ______________________________________________________

Expiration Date: _______________________________ _______________ _____

Order Your Copy Today!

An Excellent Addition to Your Library!

Section 1: System Design

Chapter 1
Enhancing Robustness Through Active Sensing and Feedback and Cautious Activities
Benjamin Murray, Email: Bmurray@unq.edu
Chapter 2
Understanding the Impact of Network Latency on Human-Computer Interaction
Garrett Martin
Chapter 3
Integrating Machine Learning and Pervasive Computing in Healthcare Applications
Peter Chen
Chapter 4
An Approach to Real-Time Medical Data Management
Andrew Johnson
Chapter 5
A Review of Pervasive Computing in Healthcare Applications
James Brown

Section 2: Frameworks and Applications

Chapter 6
Resolving and Mediating Ambiguous Contexts in Pervasive Environments
Roy Nirmalya
Chapter 7
Supporting the Ubiquitous Doctor
Ferraz Carlos
Chapter 8
mVITAL:
Ozturk Yusuf
Chapter 9
A Highly-Interactive and User-Friendly PHR Application for the Provision of Homecare Services
Koufi Vasso

Section 3: Prototypes and Research Infrastructures

Chapter 10
The Portal Monitor:
Duncan John F.
Chapter 11
Interactivating Rehabilitation through Active Multimodal Feedback and Guidance
Bongers Bert
Chapter 12
Mapping Input Technology to Ability
Garzo Ainara
Chapter 13
Restoring Balance:
Benini Maria Júlia S.
Chapter 14
A Home-Based System to support Delivery of Health and Social Care
Turner Kenneth J.

Section 4: Acknowledgments

Acknowledgments to the Authors and the Editors

Appendix A
List of Authors

Appendix B
Index of Topics and Keywords