An Excellent Addition to Your Library!

Released: December 2010

Human-Centered Design of E-Health Technologies: Concepts, Methods and Applications

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

Electronic healthcare technologies support the interaction between patients and health-service providers, institution-to-institution transmission of data, and peer-to-peer communication between patients and health professionals. These technologies promise to deliver significant improvements in access to care, quality of care, and the efficiency and productivity of the health sector.

Human-Centered Design of E-Health Technologies: Concepts, Methods and Applications unites researchers and industry practitioners from different disciplines to share their domain-specific knowledge and thereby contribute to a holistic introduction into the area of human-centered design for e-health applications. The knowledge and insights provided in this book will help students, as well as systems designers, to understand the fundamental social and technical requirements future e-health systems have to meet. By providing a well-rounded introduction within one single volume, this book is equally suited as a library reference and upper-level course supplement, but also represents a first-class resource for independent study.

Topics Covered:
- A human centered approach for developing smart health care applications
- E-health technologies in home care nursing
- Evaluating the usability of home healthcare applications
- Human experiential design of healthcare technologies
- ICT in homecare
- Neurocognitive and psychophysiological interfaces for adaptive virtual environments
- Personalized acoustic interfaces for human-computer interaction
- Smart home environments
- Usability engineering and e-health

Print: US $245.00  |  Perpetual: US $365.00  |  Print + Perpetual: US $490.00

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.

Martina Ziefle, Ph.D., is Professor for Communication Science at RWTH Aachen University, Germany, and head of a research group at the Human Technology Centre (HumTec). HumTec is funded by the Excellence Initiative of the German federal and state governments and aims at fostering high level interdisciplinary research between the humanities/social sciences and the engineering/natural sciences. Prof. Ziefle’s research addresses human factors in different technology types and using contexts, taking demands of user diversity into account. Her methodological competence regards the experimental and empirical evaluation of human computer interaction. A special research focus is directed to the usability and acceptance of mobile devices, which are increasingly used in novel contexts. Her main research concern is to shape technology innovation in ways that technology development is truly balanced with the human factor. In addition to teaching and directing research on campus, Prof. Ziefle leads various projects funded by industrial and public authorities, dealing with the interaction and communication of humans with technology.

www.igi-global.com

Publishing Academic Excellence at the Pace of Technology Since 1988
Section 1: Design Methods of E-Health Applications

Chapter 1
E-Health for Older Adults:
Mitzner Tracy L. (Georgia Institute of Technology, USA)
Dijkstra Katinka (Erasmus University, the Netherlands)

Chapter 2
Medico Ergonomics:
Podschanske Beatrix (Technische Universität Berlin, Germany)
Stahl Maria (Technische Universität Berlin, Germany)
Friedsorf Wolfgang (Technische Universität Berlin, Germany)

Chapter 3
Usability Engineering and E-Health
Huttop David (Pervasive Technology Lab (CIC), UK)

Chapter 4
Reframing Dichotomies:
Hoshi KI (Umeå University, Sweden)

Section 2: User Diversity, Social and Psychological Aspects

Chapter 5
User Diversity as a Challenge for the Integration of Medical Technology into Future Smart Home Environments
Wilkoswka Wiktoria (RWTH Aachen University, Germany)
Ziefie Martina (RWTH Aachen University, Germany)

Chapter 6
An Approach to Adapt the Product Functionality to the Abilities of Seniors
Paetzold Kristin (University of the Bundeswehr Munich, Germany)

Chapter 7
e-Health Technologies in Home Care Nursing:
Rennmers Hartmut (University of Osnabrück, Germany)
Hülshen-Giesler Manfred (University of Osnabrück, Germany)

Section 3: Human-Centered System Designs

Chapter 8
Personalized Acoustic Interfaces for Human-Computer Interaction
Rennies Jan (Fraunhofer IDMT, Hearing, Speech and Audio Technology, Germany)
Goetzee Stefan (Fraunhofer IDMT, Hearing, Speech and Audio Technology, Germany)
Appell Jens-E. (Fraunhofer IDMT, Hearing, Speech and Audio Technology, Germany)

Chapter 9
Neurocognitive and Psychophysiological Interfaces for Adaptive Virtual Environments
Parsons Thomas D. (University of Southern California, USA)
Courtney Christopher G. (University of Southern California, USA)

Section 4: Examples of Human-Centered e-Health Systems

Chapter 10
Using New Model-Based Techniques for the User Interface Design of Medical Devices and Systems
Jandl A. (RWTH Aachen University, Aachen, Germany)
Lauer W. (RWTH Aachen University, Aachen, Germany)
Pekam F. Chuembou (RWTH Aachen University, Aachen, Germany)
Radermacher K. (RWTH Aachen University, Aachen, Germany)

Chapter 11
A Cup of Coffee:
Jansson Maria (University of Umeå, Sweden)
Mörthberg Christina (Linnaeus University, Sweden and University of Oslo, Norway)

Chapter 12
Two Case Studies in Human Factors in Healthcare:
Pak Richard (Clemson University, USA)
Fink Nicole (Clemson University, USA)
Price Margaux (Clemson University, USA)
Battisto Dina (Clemson University, USA)

Chapter 13
Human-Centered Design for Health Information Technology:
Tang Charlotte (University of Calgary, Canada)
Carpendale Sheelagh (University of Calgary, Canada)

Chapter 14
Evaluating the Usability of Home Healthcare Applications
Bruun Anders (Aalborg University, Denmark)
Stage Jan (Aalborg University, Denmark)