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



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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

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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.



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