

Preface

Successful interaction with products, tools and wearable technologies depends on usable designs and accommodating the needs of potential users without requiring costly training. In this context, this book is concerned with emerging technology of wearable devices with respect to concepts, theories and applications of human factors knowledge focusing on the discovery, design and understanding of human interaction and usability issues with products and systems for their improvement. This book focuses on the human aspects of wearable technologies and game design. It shows how user-centered practices can optimize wearable experience, thus improving user acceptance, satisfaction and engagement towards novel wearable gadgets. It describes both research and best practices in the applications of human factors and ergonomics to sensors, wearable technologies and game design innovations, as well as results obtained upon integration of the wearability principles identified by various researchers for aesthetics, affordance, comfort, contextual-awareness, customization, ease of use, intuitiveness, privacy, reliability, responsiveness, satisfaction, subtlety and user friendliness. The book is organized into three sections that focus on the following subject matters:

Section 1: Wearable Technologies and Sensors

Section 2: Accessibility, Wearability and Applications

Section 3: Game Design Applications

This book will be of special value to a large variety of professionals, researchers and students in the broad field of game design, human modeling, human computer interaction and human systems integration, who are interested in feedback on device interfaces (visual and haptic), user-centered design, and design for special populations, particularly the elderly.

Each section contains research papers that have been reviewed by members of the International Editorial Board. Our sincere thanks and appreciation to the board members as listed below:

Wearable Technologies

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We hope this book is informative, but even more—thought-provoking. We hope it inspires the reader to contemplate other questions, applications, and potential solutions in creating good designs for all.

July 2017

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Advances in Human Factors in Wearable Technologies
and Game Design

Proceedings of the AHFE 2017 International
Conference on Advances in Human Factors and
Wearable Technologies, July 17-21, 2017, The Westin
Bonaventure Hotel, Los Angeles, California, USA

Ahram, T.Z.; Falcão, C. (Eds.)

2018, XI, 268 p. 115 illus., Softcover

ISBN: 978-3-319-60638-5