

Contents

Wearable Technologies: Sensors

A Wearable Flexible Sensor Network Platform for the Analysis of Different Sport Movements	3
Marcus Schmidt, Sebastian Wille, Carl Rheinländer, Norbert Wehn, and Thomas Jaitner	
Emotion Recognition Using Physiological Signals: Laboratory vs. Wearable Sensors	15
Martin Ragot, Nicolas Martin, Sonia Em, Nico Pallamin, and Jean-Marc Diverrez	
Development of Support Systems for Capturing and Reducing the Hand-Arm-Stress	23
Aydin Ünlü, Emine Alan, and Meltem Gedik	
A Wearable Device Supporting Multiple Touch- and Gesture-Based Languages for the Deaf-Blind	32
Nicholas Caporusso, Luigi Biasi, Giovanni Cinquepalmi, Gianpaolo Francesco Trotta, Antonio Brunetti, and Vitoantonio Bevilacqua	
A Step in the Right Direction – Understanding Privacy Concerns and Perceived Sensitivity of Fitness Trackers	42
Chantal Lidynia, Philipp Brauner, and Martina Ziefle	
Development of Customized Orthotics Based on Lower-Leg Anthropometric Data and Task	54
Shramana Ghosh, Nina Robson, and J.M. McCarthy	
An Intelligent Pen to Assess Anxiety Levels Through Pressure Sensors and Fuzzy Logic	64
Cristian Tapia-Jaya, Isaac Ojeda-Zamalloa, Vladimir Robles-Bykbaev, Fernando Pesántez-Avilés, Ismael San Andrés Becerra, and Verónica Cevallos León Wong	

Real-Time Eye-Interaction System Developed with Eye Tracking Glasses and Motion Capture	72
Haifeng Bao, Weining Fang, Beiyuan Guo, and Peng Wang	
Wearable Technologies: Accessibility, Wearability and Applications	
Accuracy and Efficiency Validation of a Helmet Mounted Vibrotactile Feedback System for Aerodynamic Head Position During Cycling	85
Stijn Verwulgen, Thomas Peeters, Jochen Vleugels, Robbie Geyssen, Guido De Bruyne, Wim Saeys, and Steven Truijen	
The Pressure Comfort Sensation of Female’s Body Parts Caused by Compression Garment.	94
Yongrong Wang, Yu Liu, Shengli Luo, Cheng Chen, and Lingzi Jin	
Universal Design Based Evaluation Framework for Design of Wearables	105
Vladimir Tomberg and Sebastian Kelle	
Moti-Meter: A System for Visualizing Personal Learning Motivation . . .	117
Yusuke Shimazaki and Toshikazu Kato	
Wearability and User Experience Through User Engagement: The Case Study of a Wearable Device	125
Venere Ferraro, Mila Stepanovic, and Silvia Ferraris	
A Study of Viewpoint and Feedback in Wearable Systems for Controlling a Robot Arm	136
Colin Kilby and Anthony Whitehead	
Enabling Touch-Based Communication in Wearable Devices for People with Sensory and Multisensory Impairments	149
Nicholas Caporusso, Luigi Biasi, Giovanni Cinquepalmi, Gianpaolo Francesco Trotta, Antonio Brunetti, and Vitoantonio Bevilacqua	
Wearable Sensor System for Lumbosacral Load Estimation by Considering the Effect of External Load	160
Yoshio Tsuchiya, Takashi Kusaka, Takayuki Tanaka, and Yoshikazu Matsuo	
Storytelling-Based Hand Gesture Interaction in a Virtual Reality Environment.	169
Jiyoung Kang and Jongkuk Lim	
Game Design Applications	
Pokémon Go – an Empirical User Experience Study	179
Peter Rasche, Anna Schlomann, Katharina Schäfer, Mathias Wille, Christina Bröhl, Sabine Theis, and Alexander Mertens	

Development of a Game-Based and Haptically Enhanced Application for People with Visual Impairment	186
Anirudh Juloori, Yueqing Li, and Weihang Zhu	
Game Design Creative Industry: An Overview of the Porto Digital Project in Brazil	193
Carla Patricia Teixeira, Breno José Carvalho, Anthony José Cunha Lins, Christianne Falcao, Caroline Akemi Souza, and Caio Vinicius Monteiro	
Framework for Creating Audio Games for Intelligent Personal Assistants	204
José Antonio Ciccio and Luis Quesada	
The Implementation of Acoustic in the Game Design - Insight from the Recently Popular “Onmyoji” Phenomenon in China	215
Anran Feng	
What Distinguishes a Traditional Gaming Experience from One in Virtual Reality? An Exploratory Study	225
Federica Pallavicini, Ambra Ferrari, Andrea Zini, Giacomo Garcea, Andrea Zanacchi, Gabriele Barone, and Fabrizia Mantovani	
Voice-Control as a New Trend in Games Applications	232
Wenjin Qin and Chunfu Li	
Game Design for Students: Teaching as a Whole Context.	241
Flávio Andaló, André Salomão, Milton Luiz Horn Vieira, and Bruna Mendes	
Evaluating the UX of a VR Game Using a Mixed Methodology	249
Francimar Maciel, Taynah Miyagawa, Paulo Melo, and Marcos Souza	
Gaming as a Driver for Social Behaviour Change for Sustainability . . .	258
Satyakam Sharma and Kin Wai Michael Siu	
Author Index.	267

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