Contents

Design Driven Social Innovation: Methodology and Training

Challenges to Teaching Empathy in Design .......................... 3
Young Mi Choi

Design for All. The Increasing Dissemination of Teaching Experiences ... 13
Giuseppe Di Bucchianico

An Exploration of Designer-to-User Relationship
from a Care-Orientated Perspective ........................................ 22
Ying Jiang, Timothy Joseph Jachna, and Hua Dong

Building a Tool for Multisensory Storytelling Through DfA .......... 34
Avril Accolla and Wolfgang Wagenhäuser

The Business Opportunity of Longevity .............................. 45
Avril Accolla and Filippo Garini

Advances in Design for Ageing Population

Adaptive Design of Physical, Hand-Operated Interfaces
for the Transgenerational User Using Parameterization ............. 63
Benedikt Janny, Johann Winterholler, and Thomas Maier

IoT Based Recipes for Enabling Senior Citizens: Stakeholders
Views on How Integration of IoT and Web Services Can
Enhance Well-Being and Inclusion of Older People ................. 75
Matteo Zallio, John McGrory, and Damon Berry

Design for the Active Ageing and Autonomy: The Role of Industrial
Design in the Development of the “Habitat” IOT Project .......... 88
Giuseppe Mincolelli, Silvia Imbesi, and Michele Marchi
Inclusive Design for Ageing People and the Internet of Things: Understanding Needs 
Giuseppe Mincolelli, Michele Marchi, and Silvia Imbesi

Exploring Fashion Choice Criteria for Older Chinese Female Consumers: A Wardrobe Study Approach
Minzhi Zhang, Sonja Andrew, and Simeon Gill

Qualitative Study on Salient Factors Influencing Indian Elderly’s Perception on Fall and Its Related Interventions
Nilakshi Yein and Swati Pal

Redeveloping Game Set for Living Alone Elderly with Dementia Using Participatory Action Research Approach in Hong Kong
Alex Pui-yuk King and Kin Wai Michael Siu

Initiative for Improving Medical Instruction Communication with Elderly Hearing Impaired Patients at an Outpatient Pharmacy Counter
Izumi Fukuzaki, Noriko Ishigami, Terumasa Sata, and Shinichiro Nakaishi

Inclusive Products and Service Design

Designing to Include Judges and Inner-City Tenants
Kathryn Summers, Amy Pointer, and Michele Cotton

Designing Autonomy in Cars: A Survey and Two Focus Groups on Driving Habits of an Inclusive User Group, and Group Attitudes Towards Autonomous Cars
Ioannis Politis, Patrick Langdon, Mike Bradley, Lee Skrypchuk, Alexander Mouzakitis, and P. John Clarkson

Study on the Control Device Layout of Truck Cockpit Based on User Experience
Yanlong Yao, Yinxia Li, Aiping Yang, Xin Zhang, Huimin Hu, and Yahui Bai

The Effect of Display-Control Compatibility Design of Intelligent Electric Rice Cooker on Different User Groups’ Operating Performance and Emotion
Yunhong Zhang, Mengqian Zhang, Hong Chen, Na Lin, Haitao Wang, and Fan Zhang

Analysis of Design of Washbasin for Use by the Elderly
Yoshiaki Goto, Satoshi Kose, Shinji Tanaka, Yasunari Nakajima, and Takayuki Nakamura
Inclusion in Sharing-Based Services (I-SBS): An Analytical Tool  .......... 207
Daniele Busciantella Ricci, Hua Dong, Alessandra Rinaldi, and Francesca Tosi

Universal Design of User Interfaces in Self-driving Cars ............... 220
Mexhid Ferati, Pietro Murano, and G. Anthony Giannoumis

Real-Time Cognitive Load Measurement for Dynamic Modality
Selection Using Eye-Tracking Methods ....................... 229
Azam Majooni, Amir Akhavan, and Mona Masood

Smart Tech, Web and Media for All

Recommendations for Age-Appropriate Mobile Application Design ...... 241
Alireza Darvishy and Hans-Peter Hutter

Mobile Technologies Used as Communication Support System
for People with Intellectual Disabilities: An Exploratory Study ........ 254
Chantal Mongeau and Dany Lussier-Desrochers

Design and Smart Technologies for Physical Activity as Key Factors
in Promoting Quality of Life and Social Inclusion ............. 264
Alessandra Rinaldi and Francesca Tosi

Technological Study of Brazilian Government Websites .............. 276
Newton Calegari and Reinaldo Ferraz

A Diversity Functionalities Project. Development of Inclusive
Wearable Products ........................................... 280
Gustavo Sevilla, Angela María Echeverri, Alexander Cardona,
and Luz M. Sáenz

Assessment of Users’ Impressions of Mobile Devices’ Vibrations
and How Such Impressions Affect the Recognition of Information .... 289
Takehiro Tsuji and Kubo Masayoshi

Design for Inclusion in the Living Environment

Comfort in the Indoor Environment: A Theoretical Framework
Linking Energy Efficiency and Universal Design .................... 303
Ermal Kapedani, Jasmien Herssens, and Griet Verbeeck

Opportunities for Inclusive Play in Densely Populated Cities:
An Analysis of the Human Factors in Hong Kong Play Space ........ 314
Kin Wai Michael Siu and Yi Lin Wong

Study on Wall Colors Which Constitute a Comfortable Interior
for the Elderly .................................................. 325
Masayuki Shintani, Hiroki Imoto, and Yoshiaki Goto
Urban Furniture’s Chromatic Planning Methodology:  
**Bucelas, a Case Study.** ......................................... 333  
Margarida Gamito and Joana Sousa  

**Toward Inclusive Public Transportation: Rights, not Privileges** ........ 344  
Satoshi Kose  

**Design and Evaluation Method for Living Function Resilient Equipment Based on Daily Living Systems Science** ......................... 351  
Masaaki Takizawa, Koji Kitamura, Yoshifumi Nishida, and Hiroshi Mizoguchi  

**Adaptive Technologies for Users with Changing Abilities. Towards Autonomy, Independence and Inclusion** ........................ 361  
Filippo Angelucci, Cristiana Cellucci, Michele Di Sivo, and Daniela Ladiana  

**Ergonomics and Inclusive Service Design: Exploring Possibilities for Its Application in a Developing World City** ....................... 369  
Carlos Aceves-Gonzalez  

**Inclusive and Universal Design in Clothing, Footwear and Accessories**  
**Sports-Wear in Wheelchair Rugby: Establishing Design Needs** ........ 381  
Sara Braganca, James Steele, Simeon Gill, Miguel Carvalho, and Pedro Arezes  

**Anthropometric Data Collection of Portuguese Children with Overweight and Obesity** .................................................. 390  
Raquel de Campos, Miguel Carvalho, Carla Capelassi, Humberto Lopes, and Bugao Xu  

**Clothing Comfort for the Dependent Elderly - Caregivers Perspective** .......................................................... 400  
Artemisia Caldas, Miguel Carvalho, and Humberto Lopes  

**Haute Couture and Ergonomics** ........................................... 409  
Gianni Montagna, Sandra Abreu Sousa, and Carla Morais  

**Main Characteristics and Anthropometrics of People with Down Syndrome – Impact in Garment Design** ................................. 417  
Rochelne Barboza, Miguel Carvalho, Fernando Ferreira, and Bugao Xu  

**Design for Users With Disabilities**  
**Inclusive Design of Educational Environment for Diverse People** ...... 431  
Zuzana Ceresnova, Lea Rollova, and Danica Koncekova
Teaching an Innovative E-learning Design Program for Visually Impaired Students. ............................................. 441
Theresa Lobo

Analysis of Primary Caregiver to Prevent Ergonomic Risks When Transferring a Person with Motor Disability ......................... 452
Wendy Cruz

Three-Dimensional Tactile Images for Blind People: A Proposition for a Translating Model of Static Two-Dimensional Images .......... 465
Emilia Christie Picelli Sanches, Claudia Mara Scudelari de Macedo, and Juliana Bueno

A Hybrid Approach Based on Multi-sensory Stimulation Rooms, Robotic Assistants and Ontologies to Provide Support in the Intervention of Children with Autism .............................................. 477
Vladimir Robles-Bykbaev, Carlos Arévalo-Fernández, Eulalia Naranjo-Cabrera, Paúl Quito-Naula, Jhonny Pauta-Pintado, Geanina Ávila, and Ronald Quezada

A Survey on Innovative Refreshable Braille Display Technologies ...... 488
Daniele Leonardis, Loconsole Claudio, and Antonio Frisoli

Airport Infrastructures and Satisfaction of Passengers with Reduced Mobility: The Human-System Integration and the Constraint of the Users ................................................................. 499
Natalha Carvalho, Nelson Matias, Claudia Aruítjo, Rosinei Ribeiro, and Paulo Sena

Digital Inclusion Trajectory of People with Down Syndrome: A Pilot Study ................................................................. 510
Dany Lussier-Desrochers, Claude L. Normand, Alejandro Romero-Torres, Yves Lachapelle, Geneviève Labrecque, and Valérie Godin-Tremblay

Pressure Ulcer Prevention System Based in Capacitive Sensors ........ 518
Jorge Cazho-Tobar, Jorge Barbecho-Sarango, and Freddy Bueno-Palomeque

Author Index ........................................................................... 527
Advances in Design for Inclusion
Proceedings of the AHFE 2017 International Conference on Design for Inclusion, July 17-21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA
Di Bucchianico, G.; Kercher, P.F. (Eds.)
2018, XIII, 528 p. 220 illus., Softcover
ISBN: 978-3-319-60596-8