## Table of Contents - Part II

## Age-Related Issues

How E-Inclusion and Innovation Policy Affect Digital Access and Use for Senior Citizens in Europe	3
Elderly's Barriers and Requirements for Interactive TV	13
A Survey on Technology Exposure and Range of Abilities of Elderly and Disabled Users in India	23
Senior Patients Online: Which Functions Should a Good Patient Website Offer?	32
Single Tap Hierarchy-Structured Zoom as Interface for Interactive Indoor Wayfinding Map for Elderly Users	42
Older Adults' Perceptions and Use of Technology: A Novel Approach Cara Bailey Fausset, Linda Harley, Sarah Farmer, and Brad Fain	51
A Usability Study of Websites for Older Travelers	59
Designing Intrinsically Motivating User Interfaces for the Ageing Population	68
Effect of Impairment on Upper Limb Performance in an Ageing Sample Population	78
Demands and Needs of Elderly Chinese People for Garment	88
What Is Age's Affect in Collaborative Learning Environments?	96

Age-Based Task Specialization for Crowdsourced Proofreading	104
What "Digital Divide" between Generations? A Cross-National Analysis Using Data from the World Internet Project  Tiago Lapa and Gustavo Cardoso	113
Symbiosis: An Innovative Human-Computer Interaction Environment for Alzheimer's Support	123
Interaction Science and the Aging User: Techniques to Assist in Design and Evaluation	133
User Interfaces for Older Adults	142
Volunteer Website for the Older Adult	151
Age Differences in the Knowledge and Usage of QR Codes Jonathan Mendelson and Jennifer C. Romano Bergstrom	156
Time-Mosaic Formation of Senior Workforces for Complex Irregular Work in Cooperative Farms	162
Development and Field Trial of a Social TV System for Elderly People	171
Small Input Devices Used by the Elderly – How Sensorimotor Transformation and Task Complexity Affect Interaction  Michael Oehl, Luisa Dahlmanns, and Christine Sutter	181
Conversational System Encouraging Communication of the Aged by Method of Reminiscence and Quantification of Active Participation Tetsuaki Okada, Misato Nihei, Takuya Narita, and Minoru Kamata	191
Age-Related Differences in Search Strategy and Performance When Using a Data-Rich Web Site  Erica Olmsted-Hawala, Jennifer C. Romano Bergstrom, and Wendy A. Rogers	201

Table of Contents – Part II	XIX
Are Internet and Social Network Usage Associated with Wellbeing and Social Inclusion of Seniors? – The Third Age Online Survey on Digital Media Use in Three European Countries	211
Age and Computer Self-Efficacy in the Use of Digital Technologies:  An Investigation of Prototypes for Public Self-Service Terminals Günther Schreder, Michael Smuc, Karin Siebenhandl, and Eva Mayr	221
A Framework of Affordance and Usability of Mobile User Interface for Older Adults	231
Designing for the Wisdom of Elders: Age Related Differences in Online Search Strategies	240
Human Vision in Universal Access	
Using Pupil Size Variation during Visual Emotional Stimulation in Measuring Affective States of Non Communicative Individuals	253
SERPs and Ads on Mobile Devices: An Eye Tracking Study for Generation Y	259
Effects of Long-Time 3D Viewing on the Eye Function of Accommodation and Convergence	269
Image Quality Assessment for the Visually Impaired	275
An Evaluation of the iPod Touch as an Alternative Low-Vision Magnifier for People with Low Vision	285
Form in Potential Functions While Maintaining Upright Posture during Exposure to Stereoscopic Video Clips	293
Evaluating the Legibility of Streoscopic Game Consoles Yuki Okada, Takehito Kojima, Takumi Oohashi, and Masaru Miyao	302

Measurement of Lens Accommodation and Convergence during the	200
Viewing of 3D Images	309
Multi-evaluation Method of Visual Fatigue and Motion Sickness While Viewing 2D/3D Video Clips on a Liquid Crystal Display	318
Exploring Psychophysical Factors Influencing Visibility of Virtual Image Display	327
Effect of Display Size on Body Sway in Seated Posture While Viewing an Hour-Long Stereoscopic Film	336
Emotions and Persuasion in Universal Access	
GreenSense: Developing Persuasive Service Technology by Integrating Mobile Devices and Social Interaction for Sustainable and Healthy	
Behavior	345
How Do We Feel When Babyloid Starts Crying Suddenly?	355
How Does Unintentional Eye Contact with a Robot Affect Users' Emotional Attachment to It? Investigation on the Effects of Eye Contact and Joint Attention on Users' Emotional Attachment to a Robot	363
Interaction Design for Robotic Avatars Does Avatar's Aging Cue Affect the User's Impressions of a Robot?	373
"Multicultural/Cross-Cultural Emotional Design:" The Usage of Pictographs to Design Emotional Interactive Environments	383
Talking Ally: Toward Persuasive Communication in Everyday Life Yuki Odahara, Naoki Ohshima, P. Ravindra S. De Silva, and Michio Okada	394
Beyond Rationality: Affect as a Function of User Interfaces  Bernardo Santos Schorr and Rejane Spitz	404

Table of Contents – Part II	XXI
Characteristics of Robots and Virtual Agents as a Persuasive Talker  Kaoru Sumi and Mizue Nagata	414
Age-Related Differences in Factors Contributing to Affective  Experiences among Japanese Adults	424
Regression Modeling of Reader's Emotions Induced by Font Based Text Signals	434
Design for Autistic Spectrum Disorders	
A Usability Study on Natural Interaction Devices with ASD Children	447
Virtual Reality-Based Facial Expressions Understanding for Teenagers with Autism	454
A Step towards Adaptive Multimodal Virtual Social Interaction  Platform for Children with Autism	464
A Novel Virtual Reality Driving Environment for Autism Intervention	474
A Proposed ASD-Centric Framework: The Case of ASDAPT	484
Project Communicate: Empowering Children with Autism and Their Caregivers in India	494
Towards an Affective Computing Feedback System to Benefit Underserved Individuals: An Example Teaching Social Media Skills  Mohammad Nasser Saadatzi, Karla Conn Welch, Robert Pennington, and James Graham	504
Evaluating Therapeutic Engagement and Expressive Communication in Immersive Multimedia Environments	514

Design and Evaluation of Applying Robots to Assisting and Inducing Children with Autism in Social Interaction	524
Cognitive Issues for Universal Access	
To Embody the N-Body: Spatial Perception Utilized in Large-Scale Visualizations	537
Cognitive-Based Approach for Assessing Accessibility of e-Government Websites	547
Musically Inspired Computer Interfaces: Reaction Time and Memory Enhancements in Visuo-Spatial Timelines (ViST) for Graphic User Interfaces	555
Visual Perception of Deaf Children to Inform Interaction of Tools for Literacy	565
Back on Track: Lost and Found on Public Transportation	575
Cognitive Factors Involved in the Ability to Manipulate a Digital  Camera	585
A Study of Cognitive Behavior in Relation to the Elderly Visual Experiences	594
An Approach to Universal Interaction on the Case of Knowledge  Iransfer	604
An Error Tolerant Memory Aid for Reduced Cognitive Load in Number Copying Tasks  Frode Eika Sandnes	614

Computer Vision to Develop a New Pattern Recognition Design System for Smart Home  Pin-Chin Wang, Wan-Ting Tseng, Chun-Min Cheng,  Yi-Hsuan Sung, Yi-Chun Chou, and Fong-Gong Wu	624
Handling Structural Models Composed of Objects and Their Mutual Relations in the Spatial Cognition Experiments	634
Universal Access to the Web and Social Communities	
Using Mediating Metacommunication to Improve Accessibility to Deaf in Corporate Information Systems on the Web	645
Network for All: A Proposal for an Accessible Social Media Aggregator Solution	655
Web Accessibility – From the Evaluation and Analysis to the Implementation – The anoGov/PEPPOL Case	664
WebSight: The Use of the Grid-Based Interface to Convey Layout of Web-Pages in a Non-visual Environment	674
Automatically Generating Online Social Network Messages to Combat Social Isolation of People with Disabilities	684
Analyzing Barriers for People with Hearing Loss on the Web: A Semiotic Study	694
Ibero-American Minors: How Are They Accessing and Using Information	704
User Perception Knowledge for Socially-Aware Web Document Accessibility	710

## XXIV Table of Contents - Part II

The Survey of Usability Evaluation in Social Network Sites' Reply	
Mechanism	718
Tsung-han Tsai, Fong-gong Wu, and Yu-Hsiu Hung	
Early Accessibility Evaluation in Web Application Development	726
Author Index	735