

Table of Contents – Part III

Designing for Safe and Secure Environments

Rap Backs: Continuous Workforce Monitoring to Improve Patient Safety in Long-Term Care	3
<i>Fuad Abujarad, Sarah J. Swierenga, Toni A. Dennis, and Lori A. Post</i>	
Join the Ride! User Requirements and Interface Design Guidelines for a Commuter Carpooling Platform	10
<i>Katrin Arning, Martina Ziefle, and Heike Muehlhans</i>	
SustainDesign – A Project with Young Creative People	20
<i>Roby Attisano</i>	
Using Virtual Reality to Examine Hazard Perception in Package Design	30
<i>Hande Ayanoğlu, Francisco Rebelo, Emilia Duarte, Paulo Noriega, and Luís Teixeira</i>	
Multi-touch Based Standard UI Design of Car Navigation System for Providing Information of Surrounding Areas	40
<i>Jung-Min Choi</i>	
Designing Technology for Older People – The Role of Technical Self-confidence in Usability of an Inclusive Heating Control	49
<i>Nicola Combe, David Harrison, and Hua Dong</i>	
Effects of In-Car Navigation Systems on User Perception of the Spatial Environment	57
<i>Mehmet Göktürk and Ali Pakkan</i>	
Analysis and Evaluation of Wireless Ad Hoc Network Performance for a Disaster Communication Model and Scenarios	65
<i>Koichi Gyoda</i>	
Improving Management of Medical Equipment	75
<i>Yu Hao, Yida Gong, and Young Mi (Christina) Choi</i>	
Safety of Natural Disasters	85
<i>Lamiaa F. Ibrahim, Reem Albatati, Samah Batawil, Rudainah Shilli, Mai Bakeer, and Tsneem Abo Al Laban</i>	
Interaction Design Using a Child Behavior-Geometry Database	95
<i>Hiroyuki Kakara, Yoshifumi Nishida, and Hiroshi Mizoguchi</i>	

Classifying Energy-Related Events Using Electromagnetic Field Signatures	105
<i>Anand S. Kulkarni and Karla Conn Welch</i>	
Department of Homeland Security Websites Uncoupled: An Evaluation of Online Counterterrorism and Security Information across Agencies	112
<i>Anna L. Langhorne</i>	
Development of an Unconventional Unmanned Coaxial Rotorcraft: GremLion	120
<i>Feng Lin, Kevin Z.Y. Ang, Fei Wang, Ben M. Chen, Tong Heng Lee, Beiqing Yang, Miaobo Dong, Xiangxu Dong, Jinqiang Cui, Swee King Phang, Biao Wang, Delin Luo, Shiyu Zhao, Mingfeng Yin, Kun Li, Kema Peng, and Guowei Cai</i>	
Heuristic Evaluation of iCalamityGuide Application	130
<i>Aaron Marcus, Scott Abromowitz, and Maysoon F. Abulkhair</i>	
The Driving Machine: Mobile UX Design That Combines Information Design with Persuasion Design	140
<i>Aaron Marcus and Scott Abromowitz</i>	
Human Error in Aviation: The Behavior of Pilots Facing the Modern Technology	150
<i>Isnard Thomas Martins, Edgard Thomas Martins, Marcelo Marcio Soares, and Lia Giraldo da Silva Augusto</i>	
Breaking Technological Paradigms – Sustainable Design in Air Transport Multi-mission	160
<i>Edgard Thomas Martins, Isnard Thomas Martins, and Marcelo Marcio Soares</i>	
Ergonomics Aspects in Operators of the Electric Power Control and Operation Centers	169
<i>Miguel Melo, Luiz Bueno Silva, Ana Almeida, and Francisco Rebelo</i>	
HALO the Winning Entry to the DARPA UAVForge Challenge 2012	179
<i>Stephen D. Prior, Siu-Tsen Shen, Mehmet Ali Erbil, Mantas Brazinskas, and Witold Mielniczek</i>	
Main Usability Issues in Using Virtual Environments for Older Population Warning Studies	189
<i>Lara Reis, Emilia Duarte, and Francisco Rebelo</i>	
Merging Two Worlds Together	199
<i>Alex Schieder</i>	

Are Emergency Egress Signs Strong Enough to Overlap the Influence of the Environmental Variables?	205
<i>Elisângela Vilar, Francisco Rebelo, Paulo Noriega, Luís Teixeira, Emília Duarte, and Ernesto Filgueiras</i>	
Calculation of Areas of Permanence in Public Spaces, According to Solar Radiation Simulated Conditions	215
<i>Julie A. Waldron and Jorge H. Salazar</i>	
Designing for Smart and Ambient Devices	
Design Methodology for Body Tracking Based Applications - A Kinect Case Study	227
<i>Felipe Breyer, Bernardo Reis, Luis Arthur Vasconcelos, Aline Cavalcanti, João Marcelo Teixeira, and Judith Kelner</i>	
Empowering Electronic Divas through Beauty Technology	237
<i>Katia Fabiola Canepa Vega and Hugo Fuks</i>	
An Empirical Study of the Characteristics of Interactive Projection Systems in Multi-media Exhibits	246
<i>Ting-Han Chen and Shiau-Yuan Du</i>	
Evaluation of Effects of Textures Attached to Mobile Devices on Pointing Accuracy	255
<i>Yoshitomo Fukatsu, Tatsuhito Oe, Yuki Kuno, Buntarou Shizuki, and Jiro Tanaka</i>	
A Proposal for Optimization Method of Vibration Pattern of Mobile Device with Interactive Genetic Algorithm	264
<i>Makoto Fukumoto and Takaumi Ienaga</i>	
NUI-Based Floor Navigation — A Case Study	270
<i>Ulrich Furbach and Markus Maron</i>	
Capturing Nursing Interactions from Mobile Sensor Data and In-Room Sensors	280
<i>Sozo Inoue, Kousuke Hayashida, Masato Nakamura, Yasunobu Nohara, and Naoki Nakashima</i>	
Creating Instantly Disappearing Prints Using Thermochromic Paint and Thermal Printer in an Interactive Art Installation	290
<i>Miu-Ling Lam</i>	
Fashioning Embodied Interfaces: Open Wearables Crafting	296
<i>Valérie Lamontagne</i>	

InTouch: Crossing Social Interaction with Perception	306
<i>Rung-Huei Liang, Wei-Ming Chung, Hsin-Liu Kao, and Tsen-Ying Lin</i>	
A Pilot Study of the Intuitiveness of Smartphone Camera Interface for Elderly Users	316
<i>Hyunju Shin, DaeSung Ahn, and Junghyun Han</i>	
Designing for Virtual and Augmented Environments	
Sharing Kinetic Interactions for Mobile Devices	327
<i>Bashar Altakrouri, Darren Carlson, and Andreas Schrader</i>	
Virtual Reality Immersion: An Important Tool for Diagnostic Analysis and Rehabilitation of People with Disabilities	337
<i>Helda O. Barros, Marcelo Marcio Soares, Epitácio L. Rolim Filho, Walter Correia, and Fábio Campos</i>	
Virtual Reality Applied to the Study of the Interaction between the User and the Built Space: A Literature Review	345
<i>Alexana Vilar Soares Calado, Marcelo Marcio Soares, Fábio Campos, and Walter Correia</i>	
Gestural, Emergent and Expressive: Three Research Themes for Haptic Interaction	352
<i>Jared Donovan, Gavin Sade, and Jennifer Seevinck</i>	
Sense of Presence in a VR-Based Study on Behavioral Compliance with Warnings	362
<i>Emilia Duarte, Francisco Rebelo, Luís Teixeira, Elisângela Vilar, Júlia Teles, and Paulo Noriega</i>	
Interactive Shopping Experience through Immersive Store Environments	372
<i>Kunal Mankodiya, Rolando Martins, Jonathan Francis, Elmer Garduno, Rajeev Gandhi, and Priya Narasimhan</i>	
Minimal Yet Integral – Designing a Gestural Interface	383
<i>Martin Osen</i>	
Efficient Information Representation Method for Driver-Centered AR-HUD System	393
<i>Hyesun Park and Kyong-ho Kim</i>	
Towards Medical Cyber-Physical Systems: Multimodal Augmented Reality for Doctors and Knowledge Discovery about Patients	401
<i>Daniel Sonntag, Sonja Zillner, Christian Schulz, Markus Weber, and Takumi Toyama</i>	

Border Crosser: A Robot as Mediator between the Virtual and Real World	411
<i>Anke Tallig, Wolfram Hardt, and Maximilian Eibl</i>	
Strategy for the Development of a Walk-In-Place Interface for Virtual Reality	419
<i>Luís Teixeira, Elisângela Vilar, Emilia Duarte, Paulo Noriega, Francisco Rebelo, and Fernando Moreira da Silva</i>	
Emotional and Persuasion Design	
Exhibiting Emotion: Capturing Visitors' Emotional Responses to Museum Artefacts	429
<i>Genevieve Alelis, Ania Bobrowicz, and Chee Siang Ang</i>	
Blinklifier: A Case Study for Prototyping Wearable Computers in Technology and Visual Arts	439
<i>Katia Fabiola Canepa Vega, Patricia J. Flanagan, and Hugo Fuks</i>	
Emotional Experience and Interactive Design in the Workplace	446
<i>Kuo-Pin Chen and Wen-Huei Chou</i>	
A Study on Time Differences between Actual Advertisement Viewing and Retrospective Perception	455
<i>Miao-Hsien Chuang and Chiwu Huang</i>	
Semiotic Analysis for Gestural and Emotional Human – Computer Interaction	465
<i>Roman Danylak</i>	
Evaluating Emotional Responses to the Interior Design of a Hospital Room: A Study Using Virtual Reality	475
<i>Susana Dinis, Emilia Duarte, Paulo Noriega, Luís Teixeira, Elisângela Vilar, and Francisco Rebelo</i>	
Changing Eating Behaviors through a Cooking-Based Website for the Whole Family	484
<i>Marc Fabri, Andrew Wall, and Pip Trevorrow</i>	
Design for Relaxation during Milk Expression Using Biofeedback	494
<i>Loe Feijls, Jeanine Kierkels, Nicolle H. van Schijndel, and Marjolein van Lieshout</i>	
Designing Ludic Engagement in an Interactive Virtual Dressing Room System – A Comparative Study	504
<i>Yi Gao and Eva Petersson Brooks</i>	

Humor Illustration Design, a Summary of Illustrations, Designs, and Projects	513
<i>Jochen Gasser</i>	
Increasing Trust in Personal Informatics Tools	520
<i>Luis G. Jaimes, Tylar Murray, and Andrew Raij</i>	
Feed-In Tariff Personal Carbon Allowance: A Case Study of Psychological Change	530
<i>Takayoshi Kitamura, Asao Takamatsu, Hirotake Ishii, and Hiroshi Shimoda</i>	
Positive Design: New Challenges, Opportunities, and Responsibilities for Design	540
<i>Anna Elisabeth Pohlmeier</i>	
Tassophonics: Nanotechnology as the Magical Unknown	548
<i>Audrey Samson and Kristina Andersen</i>	
Engineering Awareness TM : An e-Service Design Approach for Behavioral Change in Healthcare and Well-Being	558
<i>Alberto Sanna, Sauro Vicini, Sara Bellini, Ilaria Baroni, and Alice Rosi</i>	
Designing a Product Satisfaction Model Using Customer Segmentation and Information Consolidation	568
<i>Meng-Dar Shieh</i>	
Design Matters: Mid-Term Results from a Multi-Design Fuel Economy Feedback Experiment	578
<i>Tai Stillwater and Kenneth S. Kurani</i>	
Running to Behavior Change	585
<i>Pip Trevorrorow and Marc Fabri</i>	
Well-Being on the Go: An IoT Vending Machine Service for the Promotion of Healthy Behaviors and Lifestyles	594
<i>Sauro Vicini, Sara Bellini, Alice Rosi, and Alberto Sanna</i>	
Author Index	605