

Contents

Designing and Developing Intelligent Environments

Visualizing Human-Environment Interactions: Integrating Concepts and Techniques from HCI, Human Factors and Media Psychology	3
<i>Bimal Balakrishnan, Loukas Kalisperis, and Danielle Oprean</i>	
Using the GQM Method to Evaluate Calmness in Ubiquitous Applications . . .	13
<i>Rainara M. Carvalho, Rossana M.C. Andrade, and Káthia M. Oliveira</i>	
Distributable Interface Design for Web Applications	25
<i>Gianni Fenu and Lucio Davide Spano</i>	
The Map as a Tool for Identifying Pervasive Interactions in Today's Home	36
<i>Konstantinos Grivas and Stelios Zerefos</i>	
Makers with a Cause: Fabrication, Reflection and Community Collaboration	49
<i>Foad Hamidi and Melanie Baljko</i>	
Enabling Programmability of Smart Learning Environments by Teachers . . .	62
<i>Asterios Leonidis, Margherita Antona, and Constantine Stephanidis</i>	
Co-creation in Context: The User as Co-creator Approach	74
<i>Ingrid Mulder, Fenne Van Doorn, and Pieter Jan Stappers</i>	
Star(t) to Shine: Unlocking Hidden Talents Through Sharing and Making . . .	85
<i>Emilia Louisa Pucci and Ingrid Mulder</i>	
A Framework for Navigating Human Behavior Through Gameful Digital Rhetoric.	97
<i>Mizuki Sakamoto and Tatsuo Nakajima</i>	
Evaluating Ubiquitous Computing Environments Using 3D Simulation	109
<i>Arlindo Santos and Helena Rodrigues</i>	
The Transformative Potential of Making in Teacher Education: A Case Study on Teacher Training Through Making and Prototyping	119
<i>Susanna Tesconi and Lucía Arias</i>	

Natural Interaction

Brain Signal for Smart Offices	131
<i>Ghada Al-Hudhud, Noha Alrajhi, Nouf Alonaizy, Aysha Al-Mahmoud, Latifah Almazrou, and Dalal bin Muribah</i>	
Developing and Evaluating Two Gestural-Based Virtual Environment Navigation Methods for Large Displays	141
<i>Paulo Dias, João Parracho, João Cardoso, Beatriz Quintino Ferreira, Carlos Ferreira, and Beatriz Sousa Santos</i>	
Immersing Users in Landscapes Using Large Scale Displays in Public Spaces	152
<i>Giannis Drossis, Antonios Ntelidakis, Dimitris Grammenos, Xenophon Zabulis, and Constantine Stephanidis</i>	
A Gesture Recognition Method for Proximity-Sensing Surfaces in Smart Environments	163
<i>Biying Fu, Tobias Grosse-Puppendahl, and Arjan Kuijper</i>	
Developing Intuitive Gestures for Spatial Interaction with Large Public Displays	174
<i>Yubo Kou, Yong Ming Kow, and Kelvin Cheng</i>	
AR Coloring Jigsaw Puzzles with Texture Extraction and Auto-UV Mapping Algorithm	182
<i>Youngho Lee</i>	
Smart Kiosk with Gait-Based Continuous Authentication	188
<i>Duong-Tien Phan, Nhan Nguyen-Trong Dam, Minh-Phuc Nguyen, Minh-Triet Tran, and Toan-Thinh Truong</i>	
Gesture-Based Configuration of Location Information in Smart Environments with Visual Feedback	201
<i>Carsten Stockl�w and Martin Majewski</i>	
Subjective User Experience and Performance with Active Tangibles on a Tabletop Interface	212
<i>Jan B.F. van Erp, Alexander Toet, Koos Meijer, Joris Janssen, and Arnoud de Jong</i>	
Auditory Browsing Interface of Ambient and Parallel Sound Expression for Supporting One-to-many Communication	224
<i>Tomoko Yonezawa</i>	

Design and Development of Distributed, Ambient and Pervasive Interactions

Immersiveness of Ubiquitous Computing Environments Prototypes: A Case Study	237
<i>Tiago Abade, José C. Campos, Rui Moreira, Carlos C.L. Silva, and José Luís Silva</i>	
Employing Virtual Humans for Interaction, Assistance and Information Provision in Ambient Intelligence Environments	249
<i>Chryssi Birliraki, Dimitris Grammenos, and Constantine Stephanidis</i>	
From Collaborative Scenario Recording to Smart Room Assistance Models.	262
<i>Gregor Buchholz and Peter Forbrig</i>	
Hierarchical Narrowcasting.	274
<i>Michael Cohen</i>	
Development of a User-Oriented IoT Middleware Architecture Based on Users' Context Data	287
<i>Taehyun Ha, Sangwon Lee, and Narae Kim</i>	
Measuring the Arrangement of Multiple Information Devices by Observing Their User's Face	296
<i>Saori Kikutani, Koh Kakusho, Takeshi Okadome, Masaaki Iiyama, and Satoshi Nishiguchi</i>	
SpreadView: A Multi-touch Based Multiple Contents Visualization Method Composed of Aligned Layers	305
<i>Joong Ho Lee, Hyoyoung Kim, and Ji-Hyung Park</i>	
Bandage Man: A Spatial Interaction Design in a Sensible Space for Connecting Family.	317
<i>Min-Nan Liao and Teng-Wen Chang</i>	
Learning Instead of Markers: Flexible Recognition of Mobile Devices on Interactive Surfaces.	325
<i>Philipp Mock, Jörg Edelmann, and Wolfgang Rosenstiel</i>	
GlassNage: Layout Recognition for Dynamic Content Retrieval in Multi-Section Digital Signage	337
<i>Adiyan Mujibiya</i>	
Manseibashi Reminiscent Window: On-Site AR Exhibition System Using Mobile Devices	349
<i>Naoya Okada, Jun Imura, Takuji Narumi, Tomohiro Tanikawa, and Michitaka Hirose</i>	

Enhancing Facial Impression for Video Conference	362
<i>Sungyeon Park, Heeseung Choi, and Ig-Jae Kim</i>	
Art and Coffee in the Museum	370
<i>Nikolaos Partarakis, Emmanouil Zidianakis, Margherita Antona, and Constantine Stephanidis</i>	
Context-Based Document Management in Smart Living Environments.	382
<i>Julian von Wilmsdorf, Alexander Marinc, and Arjan Kuijper</i>	

Smart Devices, Objects and Materials

The Capacitive Chair.	397
<i>Andreas Braun, Sebastian Frank, and Reiner Wichert</i>	
Aspects Concerning the Calibration Procedure for a Dual Camera Smartphone Based ADAS	408
<i>Mihai Duguleana, Florin Girbacia, Cristian Postelnicu, Andreea Beraru, and Gheoghe Mogan</i>	
Task Specific Paper Controller that Can Be Created by Users for a Specific Computer Operation	418
<i>Daisuke Komoriya, Buntarou Shizuki, and Jiro Tanaka</i>	
Re-appropriating Old Furniture via IoT, in an Artistic Context: The Case of “DolceVita”	429
<i>Irene Mavrommati and Konstantinos Grivas</i>	
Novel Method for Notification from Interactive Smart Cover	437
<i>Young Hoon Oh and Da Young Ju</i>	
Combining Generative Art and Physiological Information for New Situation of Garden Restaurant	449
<i>Tung-Chen Tsai and Chao-Ming Wang</i>	
Design of Co-evolving Textiles Applied to Smart Products	461
<i>Rachel Zuanon and Geraldo Coelho Lima Júnior</i>	

Location, Motion and Activity Recognition

User Location Modeling Based on Heterogeneous Data Sources	473
<i>Patrick Gottschaemmer, Tobias Grosse-Puppendahl, and Arjan Kuijper</i>	
Monitoring Wildlife in Contaminated Environments via the Carrier Pigeon-Like Sensing System.	485
<i>Hiroki Kobayashi, Hiromi Kudo, and Kaoru Sezaki</i>	

Crowd Monitoring: Critical Situations Prevention Using Smartphones and Group Detection	496
<i>Joseph El Mallah, Francesco Carrino, Omar Abou Khaled, and Elena Mugellini</i>	
Indirect Monitoring of Cared Person by Onomatopoeic Text of Environmental Sound and User's Physical State	506
<i>Yusuke Naka, Naoto Yoshida, and Tomoko Yonezawa</i>	
Estimating Positions of Students in a Classroom from Camera Images Captured by the Lecturer's PC	518
<i>Junki Nishikawa, Koh Kakusho, Masaaki Iiyama, Satoshi Nishiguchi, and Masayuki Murakami</i>	
Activity Context Integration in Mobile Computing Environments	527
<i>Yoosoo Oh</i>	
BearWatcher: Animal Motion Estimation Application for Tourism and Welfare	536
<i>Keni Ren, Jani Hourunranta, Joni Tolonen, and Johannes Karlsson</i>	
Children Tracking System in Indoor and Outdoor Places	547
<i>Mounira Taileb, Wejdan Wajdi, Hind Hamdi, Galia Al-Garni, Sarah Al-Shehri, and Manal Al-Marwani</i>	
Smart Cities and Communities	
Spending Precious Travel Time More Wisely: A Service Model that Provides Instant Travel Assistance Using Input from Locals	557
<i>Kenro Aihara, Susumu Kono, and Shizuhiko Sugino</i>	
Interpreting Food-Venue Visits: Spatial and Social Contexts of Mobile Consumption in Urban Spaces	568
<i>Shin'ichi Konomi, Kenta Shoji, and Tomoyo Sasao</i>	
Co-design Practice in a Smart City Context Through the Gamification Approach: A Survey About the Most Suitable Applications	578
<i>Antonio Opromolla, Valentina Volpi, Andrea Ingrosso, and Carlo Maria Medaglia</i>	
Activity Recipe: Spreading Cooperative Outdoor Activities for Local Communities Using Contextual Reminders	590
<i>Tomoyo Sasao, Shin'ichi Konomi, and Keisuke Kuribayashi</i>	
Personalized Energy Reduction Cyber-physical System (PERCS): A Gamified End-User Platform for Energy Efficiency and Demand Response	602
<i>Nicole D. Sintov, Michael D. Orosz, and P. Wesley Schultz</i>	

Tou Hsiang Kun – A Platform for Elderly and Neighborhood to Help Each Other	614
<i>Yi-Sin Wu, Teng-Wen Chang, Ying-Ru He, Yi Wang, Wei-Hung Chen, and You-Cheng Zhang</i>	
Consumer Concerns About Smart Meters	625
<i>Rani Yesudas and Roger Clarke</i>	
Humor in Ambient Intelligence	
Laughter as the Best Medicine: Exploring Humour-Mediated Health Applications	639
<i>Claire Dormann</i>	
An AI for Humorously Reframing Interaction Narratives with Human Users	651
<i>Christian F. Hempelmann and Max Petrenko</i>	
Humor Techniques: From Real World and Game Environments to Smart Environments	659
<i>Anton Nijholt</i>	
On Algorithmic Discovery and Computational Implementation of the Opposing Scripts Forming a Joke	671
<i>Victor Raskin</i>	
Different Knowledge, Same Joke: Response-Based Computational Detection of Humor.	680
<i>Julia M. Taylor</i>	
Twitter: The Best of Bot Worlds for Automated Wit	689
<i>Tony Veale, Alessandro Valitutti, and Guofu Li</i>	
Author Index	701

Distributed, Ambient, and Pervasive Interactions
Third International Conference, DAPI 2015, Held as Part
of HCI International 2015, Los Angeles, CA, USA, August
2-7, 2015, Proceedings
Streitz, N.; Markopoulos, P. (Eds.)
2015, XVIII, 702 p. 274 illus., Softcover
ISBN: 978-3-319-20803-9