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Margherita Antona · Constantine Stephanidis (Eds.)

Universal Access in Human-Computer Interaction

Interaction Techniques and Environments

10th International Conference, UAHCI 2016
Held as Part of HCI International 2016
Toronto, ON, Canada, July 17–22, 2016
Proceedings, Part II

Editors

Margherita Antona
Foundation for Research & Technology –
Hellas (FORTH)
Heraklion, Crete
Greece

Constantine Stephanidis
University of Crete / Foundation for
Research & Technology – Hellas
(FORTH)
Heraklion, Crete
Greece

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Foreword

The 18th International Conference on Human-Computer Interaction, HCI International 2016, was held in Toronto, Canada, during July 17–22, 2016. The event incorporated the 15 conferences/thematic areas listed on the following page.

A total of 4,354 individuals from academia, research institutes, industry, and governmental agencies from 74 countries submitted contributions, and 1,287 papers and 186 posters have been included in the proceedings. These papers address the latest research and development efforts and highlight the human aspects of the design and use of computing systems. The papers thoroughly cover the entire field of human-computer interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. The volumes constituting the full 27-volume set of the conference proceedings are listed on pages IX and X.

I would like to thank the program board chairs and the members of the program boards of all thematic areas and affiliated conferences for their contribution to the highest scientific quality and the overall success of the HCI International 2016 conference.

This conference would not have been possible without the continuous and unwavering support and advice of the founder, Conference General Chair Emeritus and Conference Scientific Advisor Prof. Gavriel Salvendy. For his outstanding efforts, I would like to express my appreciation to the communications chair and editor of *HCI International News*, Dr. Abbas Moallem.

April 2016

Constantine Stephanidis

HCI International 2016 Thematic Areas and Affiliated Conferences

Thematic areas:

- Human-Computer Interaction (HCI 2016)
- Human Interface and the Management of Information (HIMI 2016)

Affiliated conferences:

- 13th International Conference on Engineering Psychology and Cognitive Ergonomics (EPCE 2016)
- 10th International Conference on Universal Access in Human-Computer Interaction (UAHCI 2016)
- 8th International Conference on Virtual, Augmented and Mixed Reality (VAMR 2016)
- 8th International Conference on Cross-Cultural Design (CCD 2016)
- 8th International Conference on Social Computing and Social Media (SCSM 2016)
- 10th International Conference on Augmented Cognition (AC 2016)
- 7th International Conference on Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management (DHM 2016)
- 5th International Conference on Design, User Experience and Usability (DUXU 2016)
- 4th International Conference on Distributed, Ambient and Pervasive Interactions (DAPI 2016)
- 4th International Conference on Human Aspects of Information Security, Privacy and Trust (HAS 2016)
- Third International Conference on HCI in Business, Government, and Organizations (HCIBGO 2016)
- Third International Conference on Learning and Collaboration Technologies (LCT 2016)
- Second International Conference on Human Aspects of IT for the Aged Population (ITAP 2016)

Conference Proceedings Volumes Full List

1. LNCS 9731, Human-Computer Interaction: Theory, Design, Development and Practice (Part I), edited by Masaaki Kurosu
2. LNCS 9732, Human-Computer Interaction: Interaction Platforms and Techniques (Part II), edited by Masaaki Kurosu
3. LNCS 9733, Human-Computer Interaction: Novel User Experiences (Part III), edited by Masaaki Kurosu
4. LNCS 9734, Human Interface and the Management of Information: Information, Design and Interaction (Part I), edited by Sakae Yamamoto
5. LNCS 9735, Human Interface and the Management of Information: Applications and Services (Part II), edited by Sakae Yamamoto
6. LNAI 9736, Engineering Psychology and Cognitive Ergonomics, edited by Don Harris
7. LNCS 9737, Universal Access in Human-Computer Interaction: Methods, Techniques, and Best Practices (Part I), edited by Margherita Antona and Constantine Stephanidis
8. LNCS 9738, Universal Access in Human-Computer Interaction: Interaction Techniques and Environments (Part II), edited by Margherita Antona and Constantine Stephanidis
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10. LNCS 9740, Virtual, Augmented and Mixed Reality, edited by Stephanie Lackey and Randall Shumaker
11. LNCS 9741, Cross-Cultural Design, edited by Pei-Luen Patrick Rau
12. LNCS 9742, Social Computing and Social Media, edited by Gabriele Meiselwitz
13. LNAI 9743, Foundations of Augmented Cognition: Neuroergonomics and Operational Neuroscience (Part I), edited by Dylan D. Schmorrow and Cali M. Fidopiastis
14. LNAI 9744, Foundations of Augmented Cognition: Neuroergonomics and Operational Neuroscience (Part II), edited by Dylan D. Schmorrow and Cali M. Fidopiastis
15. LNCS 9745, Digital Human Modeling and Applications in Health, Safety, Ergonomics and Risk Management, edited by Vincent G. Duffy
16. LNCS 9746, Design, User Experience, and Usability: Design Thinking and Methods (Part I), edited by Aaron Marcus
17. LNCS 9747, Design, User Experience, and Usability: Novel User Experiences (Part II), edited by Aaron Marcus
18. LNCS 9748, Design, User Experience, and Usability: Technological Contexts (Part III), edited by Aaron Marcus
19. LNCS 9749, Distributed, Ambient and Pervasive Interactions, edited by Norbert Streitz and Panos Markopoulos
20. LNCS 9750, Human Aspects of Information Security, Privacy and Trust, edited by Theo Tryfonas

21. LNCS 9751, HCI in Business, Government, and Organizations: eCommerce and Innovation (Part I), edited by Fiona Fui-Hoon Nah and Chuan-Hoo Tan
22. LNCS 9752, HCI in Business, Government, and Organizations: Information Systems (Part II), edited by Fiona Fui-Hoon Nah and Chuan-Hoo Tan
23. LNCS 9753, Learning and Collaboration Technologies, edited by Panayiotis Zaphiris and Andri Ioannou
24. LNCS 9754, Human Aspects of IT for the Aged Population: Design for Aging (Part I), edited by Jia Zhou and Gavriel Salvendy
25. LNCS 9755, Human Aspects of IT for the Aged Population: Healthy and Active Aging (Part II), edited by Jia Zhou and Gavriel Salvendy
26. CCIS 617, HCI International 2016 Posters Proceedings (Part I), edited by Constantine Stephanidis
27. CCIS 618, HCI International 2016 Posters Proceedings (Part II), edited by Constantine Stephanidis

Universal Access in Human–Computer Interaction

**Program Board Chairs: Margherita Antona, Greece,
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The full list with the program board chairs and the members of the program boards of all thematic areas and affiliated conferences is available online at:

<http://www.hci.international/2016/>



HCI International 2017

The 19th International Conference on Human-Computer Interaction, HCI International 2017, will be held jointly with the affiliated conferences in Vancouver, Canada, at the Vancouver Convention Centre, July 9–14, 2017. It will cover a broad spectrum of themes related to human-computer interaction, including theoretical issues, methods, tools, processes, and case studies in HCI design, as well as novel interaction techniques, interfaces, and applications. The proceedings will be published by Springer. More information will be available on the conference website: <http://2017.hci.international/>.

General Chair

Prof. Constantine Stephanidis

University of Crete and ICS-FORTH

Heraklion, Crete, Greece

E-mail: general_chair@hci2017.org

<http://2017.hci.international/>



Contents – Part II

Multimodal and Natural Interaction for Universal Access

A Human-Computer Interface and an Analysis on the Drawing of Curves with a Face Tracker Mouse	3
<i>Ivana S. Bandeira and Fernando Henrique G. Zucattelli</i>	
The Common Characteristics of User-Defined and Mid-Air Gestures for Rotating 3D Digital Contents.	15
<i>Li-Chieh Chen, Yun-Maw Cheng, Po-Ying Chu, and Frode Eika Sandnes</i>	
Evaluating Somatosensory Interactions: Designing a Handheld Tactile Acoustic Device for Mobile Phones.	23
<i>Maria Karam and Patrick M. Langdon</i>	
Body Motion Analysis for Emotion Recognition in Serious Games	33
<i>Kyriaki Kaza, Athanasios Psaltis, Kiriakos Stefanidis, Konstantinos C. Apostolakis, Spyridon Thermos, Kosmas Dimitropoulos, and Petros Daras</i>	
Design and Evaluation of an Authoring Tool and Notation System for Vibrotactile Composition	43
<i>Somang Nam and Deborah Fels</i>	
Active-Wheel Mouse for Human-Computer Interface: Slippage-Perception Characteristics on Fingerpad.	54
<i>Yoshihiko Nomura and Satoshi Oike</i>	
BCIs for DOC Patients: Assessment, Communication, and New Directions . .	62
<i>Rupert Ortner, Jitka Annen, Tim von Oertzen, Arnau Espinosa, Javi Rodriguez, Brendan Z. Allison, Günter Edlinger, Steven Laureys, Martin Hamberger, Andrea Kammerhofer, Florian Guttmann, and Christoph Guger</i>	
The Improvement of Cognitive Maps of Individuals with Blindness Through the Use of an Audio-Tactile Map	72
<i>Konstantinos Papadopoulos, Marialena Barouti, and Eleni Koustriava</i>	
Evaluation of the Use of Eye and Head Movements for Mouse-like Functions by Using IOM Device.	81
<i>Andréia Sias Rodrigues, Vinicius da Costa, Márcio Bender Machado, Angélica Lacerda Rocha, Joana Marini de Oliveira, Marcelo Bender Machado, Rafael Cunha Cardoso, Cleber Quadros, and Tatiana Aires Tavares</i>	

Usability Evaluation of a Wheelchair Virtual Simulator Controlled by a Brain-Computer Interface: Lessons Learned to the Design Process	92
<i>Anderson Schuh, Marcia de Borba Campos, Marta Bez, and João Batista Mossmann</i>	
Long-Term Evaluation of a Modular Gesture Interface at Home for Persons with Severe Motor Dysfunction	102
<i>Ikushi Yoda, Kazuhiko Ito, and Tsuyoshi Nakayama</i>	
Universal Access to Mobile Interaction	
How to Achieve Design for All: “List”, “Focus” and “Multimodality” as Minimal Requirements.	117
<i>Denis Chêne, Éric Petit, and Sophie Zijp-Rouzier</i>	
VoxLaps: A Free Symbol-Based AAC Application for Brazilian Portuguese . . .	129
<i>Karla de Oliveira, Jefferson Junior, Jefferson Silva, Nelson Neto, Marcelle Mota, and Ana Oliveira</i>	
Three Text Entry Methods Based on Smartphone Discrete Tilting: An Empirical Evaluation	141
<i>Sandi Ljubic</i>	
Braillet the Wristwatch-Style Refreshable Braille Display: Its Hardware, User Interface and Benchmarks.	153
<i>Kazunori Minatani</i>	
Evaluation of Non-visual Zooming Operations on Touchscreen Devices.	162
<i>Hariprasath Palani, Uro Giudice, and Nicholas A. Giudice</i>	
Proposal of an Alternative HMI Mechanism for Blind Android Users Based on Media Headsets as Input/Output Peripherals.	175
<i>Miguel Páramo Castrillo, Silvia de los Ríos, Juan Bautista Montalvá Colomer, María Fernanda Cabrera-Umpierrez, and María Teresa Arredondo</i>	
LOVIE: A Word List Optimized for Visually Impaired UsErs on Smartphones	185
<i>Philippe Roussille and Mathieu Raynal</i>	
Design of a Mobile Augmented Reality Application: An Example of Demonstrated Usability	198
<i>Tsai-Hsuan Tsai, Hsien-Tsung Chang, Ming-Chun Yu, Huan-Ting Chen, Chun-Yi Kuo, and Wei-Hung Wu</i>	
Task Performance of Color Adaptation on the Screen Display	206
<i>Fong-Gong Wu, Carlos Cheang, and SuHuey Tan</i>	

Virtual Reality, 3D and Universal Access

Human Performance and Cognitive Workload in Multi-sensory
Virtual Environments. 219
Mortaja AlQassab and David Wang

The Impact of Tactile Sensations on Virtual Reality Impairment 231
*Mortaja AlQassab, Adam Gomes, Maria Karam, David Wang,
Zhechen Du, Orion Bruckman, and Richard Bustos*

Autonomous Identification of Virtual 3D Objects by Visually Impaired
Users with Proprioception and Audio Feedback 241
Erico de Souza Veriscimo and João Luiz Bernardes Jr.

3D Interaction Accessible to Visually Impaired Users: A Systematic
Review 251
Erico de Souza Veriscimo and João Luiz Bernardes Jr.

Haptic Virtual Approach: Biological Effect on Touching and Viewing. 261
Atsushi Hoshina, Yoshiko Okada, Irini Giannopulu, and Midori Sugaya

Measurement of Lens Focus Adjustment While Wearing a See-Through
Head-Mounted Display 271
*Ryota Kimura, Kohei Iwata, Takahiro Totani, Toshiaki Miyao,
Takehito Kojima, Hiroki Takada, Hiromu Ishio, Chizue Uneme,
Masaru Miyao, and Masumi Takada*

Changes of Potential Functions While Maintaining Upright Postures
After Exposure to Stereoscopic Video Clips 279
*Fumiya Kinoshita, Kohei Iwata, Yasuyuki Matsuura, Masaru Miyao,
and Hiroki Takada*

Metaphor and Storytelling in Interface Design for Virtual Reality 287
Andreas Kratky

Haptic Training Simulator for Pedicle Screw Insertion in Scoliosis Surgery. . . 301
*Maryam Moafimadani, Adam Gomes, Karl Zabjek, Reinhard Zeller,
and David Wang*

Automation of the Simple Test for Evaluating Hand Function Using Leap
Motion Controller 312
Kouki Nagamune, Yosuke Uozumi, and Yoshitada Sakai

Using Virtual Reality to Enhance Vision for People Who Are Blind
in One Eye. 320
Michael Ostrander and Tony Morelli

3D Modeling of the Milreu Roman Heritage with UAVs	329
<i>José Rodrigues, Mauro Figueiredo, João Bernardes, and César Gonçalves</i>	
Communicating Panoramic 360 Degree Immersed Experiences: A Simple Technique for Sketching in 3D.	338
<i>Frode Eika Sandnes</i>	
Relationship Between Feeling of Presence and Visually Induced Motion Sickness While Viewing Stereoscopic Movies	347
<i>Akihiro Sugiura, Takehito Kojima, Hiroki Takada, Kunihiko Tanaka, and Masaru Miyao</i>	
Intelligent and Assistive Environments	
A Universal Design Method for Adaptive Smart Home Environment.	359
<i>Silvia Ceccacci, Lorenzo Cavalieri, Francesca Gullà, Roberto Menghi, and Michele Germani</i>	
A Deep Neural Network Video Framework for Monitoring Elderly Persons . . .	370
<i>M. Farrajota, João M.F. Rodrigues, and J.M.H. du Buf</i>	
The MOBOT Platform – Showcasing Multimodality in Human-Assistive Robot Interaction	382
<i>Eleni Efthimiou, Stavroula-Evita Fotinea, Theodore Goulas, Athanasia-Lida Dimou, Maria Koutsombogera, Vassilis Pitsikalis, Petros Maragos, and Costas Tzafestas</i>	
Designing a Smart Scarf to Influence Group Members’ Emotions in Ambience: Design Process and User Experience	392
<i>Chen Guo, Yingjie Victor Chen, Zhenyu Cheryl Qian, Yue Ma, Hanhdung Dinh, and Saikiran Anasingaraju</i>	
Wheelchair Users’ Psychological Barrier Estimation Based on Inertial and Vital Data	403
<i>Takashi Isezaki, Arinobu Nijjima, Akihiro Miyata, Tomoki Watanabe, and Osamu Mizuno</i>	
Human Aware Robot Navigation in Semantically Annotated Domestic Environments	414
<i>Ioannis Kostavelis, Dimitrios Giakoumis, Sotiris Malassiotis, and Dimitrios Tzovaras</i>	
Use of See-Through Wearable Display as an Interface for a Humanoid Robot.	424
<i>Shu Matsuura</i>	

Hybrid BCI Systems as HCI in Ambient Assisted Living Scenarios.	434
<i>Niccolò Mora, Ilaria De Munari, and Paolo Ciampolini</i>	
Accessibility of Cultural Heritage Exhibits	444
<i>Nikolaos Partarakis, Iosif Klironomos, Margherita Antona, George Margetis, Dimitris Grammenos, and Constantine Stephanidis</i>	
Inclusive Smart City: An Exploratory Study	456
<i>João Soares de Oliveira Neto and Sergio Takeo Kofuji</i>	
A Study Exploring the Concept of Virtual Windows for the Elderly	466
<i>Kevin C. Tseng, Huu-Kha Hoang, and Po-Hsin Huang</i>	
Author Index	473