Contents – Part II

Interaction in Virtual and Augmented Reality

Factors of Cybersickness ................................................. 3
   Patricia Bockelman and Deanna Lingum

Effects of Short Exposure to a Simulation in a Head-Mounted Device and the Individual Differences Issue ........................................... 9
   David Hartnagel, Marine Taffou, and Patrick M.B. Sandor

Projection Simulator to Support Design Development of Spherical Immersive Display .................................................. 17
   Wataru Hashimoto, Yasuharu Mizutani, and Satoshi Nishiguchi

Immersive Virtual Experience: An Effort to Increase the Interest for Reading on First-Time Readers ....................................... 25
   Luis Hernández-Zavaleta, Jaime Espinoza-Martínez, Diana Morón-González, Alba Núñez-Reyes, Carlos Rivero-Moreno, Octavio Mercado-González, and Alejandra Osorio-Olave

Correcting Distortion of Views into Spherical Tank in Aquarium .......... 32
   Yukio Ishihara and Makio Ishihara

A Study on VR Sickness Prediction of HMD Contents Using Machine Learning Technique ................................................. 38
   Jae Beom Kim and Changhoon Park

Physically-Based Clay Art Rendering with HMD VR ...................... 42
   Donghwe Lee, Hyunmin Choi, and Seongah Chin

Feasibility of Integrated GNSS/OBD-II/IMU as a Prerequisite for Virtual Reality .................................................. 48
   J.H. Lim, K.H. Choi, W. Yoo, L. Kim, Y. Lee, and Hyung Keun Lee

Presence and Usability Do Not Directly Predict Procedural Recall in Virtual Reality .................................................. 54
   Bradford L. Schroeder, Shannon K.T. Bailey, Cheryl I. Johnson, and Emily Gonzalez-Holland

Webizing Interactive CAD Review System Using Super Multiview Autostereoscopic Displays ................................................. 62
   Daeil Seo, Yongjae Lee, and Byounghyun Yoo
Webizing Virtual Reality-Based Interactive Interior Design System
   Daeil Seo, Jongho Lee, and Byounghyun Yoo

Error Monitoring and Correction Related to the Sense of Presence in Virtual Environments
   Boris B. Velichkovsky, Alexey N. Gusev, Alexander E. Kremlev, and Sergey S. Grigorovich

3D Route Planning Within a Stereoscopic Environment Based on 2D Mouse Interaction
   Leonhard Vogelmeier, Christoph Vernaleken, and Peter Sandl

The Implementation of Instructional Strategies for Training in a Virtual Environment: An Exploratory Investigation of Workload and Performance
   Elizabeth Wolfe, John Granger, Natalie Alessi, Lauren Farrell, and Crystal Maraj

Service Design of Intergeneration Home-Sharing System Using VR-Based Simulation Technology and Optimal Matching Algorithms
   Taeha Yi, Jimin Rhim, Injung Lee, Amartuvshin Narangerel, and Ji-Hyun Lee

Learning, Games and Gamification

Application of Human Computer Interaction Interface in Game Design
   Jing Cao and Ying Cao

Creating an Environment for Millennials
   Bruce Gooch, Nicolas Bain, and Taylor Day

Flexible Virtual Environments: Gamifying Immersive Learning
   Neil Gordon and Mike Brayshaw

The Effect of Emotion in an Ultimatum Game:
The Bio-Feedback Evidence
   Yifan He and Tiffany Y. Tang

Motion Recognition Interactive Game Activity for Early Childhood
   Hyung-Sook Kim and Seong-Hee Chung

Development of Gesture Recognition-Based Educational Dance Game for Children with Intellectual Disability
   Hyung Sook Kim, Yonghyun Park, Sunghee Hong, and Junghwan Hwang
Development of Educational Application Using Standard Movement Code-Based on Human Behavior ................................. 141

Hyung Sook Kim, Chan-Ik Park, David O’Sullivan, and Jeesun Lee

A Serious Game to Teach Computing Concepts ....................... 146

Devorah Kletenik, Florencia Salinas, Chava Shulman, Claudia Bergeron, and Deborah Sturm

An Analysis of Students’ Learning Behaviors Using Variable-Speed Playback Functionality on Online Educational Platforms ..................... 154

Toru Nagahama and Yusuke Morita

Collaborative Learning Support System for Programming Education Using Gamification ................................................. 160

Kohei Otake and Tomofumi Uetake

Personalizing Game by Using Social Network .......................... 167

Jaebum Park, Huitae Ryu, and Changhoon Park

Learning to Code in a Community of Practice in Mozambique:
The Case of MozDevz.......................................................... 172

Ivan Ruby and Salomão David

“Free Will”: A Serious Game to Study the Organization of the Human Brain................................................................. 178

Deborah Sturm, Jonathan Zomick, Ian Loch, and Dan McCloskey

Purposive Game Production in Educational Setup: Investigating Team Collaboration in Virtual Reality ........................................... 184

Olga Timcenko, Lise Busk Kofoed, Henrik Schoenau-Fog, and Lars Reng

Frustrating Interaction Design of AS IF, an Embodied Interaction Game for Perspective Taking Towards Physical Limitations .................. 192

Servet Ulas, Weina Jin, Xin Tong, Diane Gromala, and Chris Shaw

The Influence of Toy Design Factors on Children’s Problem-Solving Skills ............................................................... 199

Tien-Ling Yeh and Jo-Han Chang

Understanding Reading Comprehension in Multi-display Presenting System: Visual Distribution and Cognitive Effect .................... 207

Xueqing Zhang and Sanya Liu
Health, Well-Being and Comfort

Improving Patient Satisfaction Using a Video-Based Patient Education Platform ........................................... 217
    Katharine T. Adams, Alexander D. Walker, Eileen Searson, John Yosaitis, Rita Owens, and Lowell Satler

Developing a Health-Enabling Service System Combining Wearable Device and Personal Health Records for Older Adults .................. 225
    Kuei-Ling Belinda Chen and Peisan Lee

FitViz: A Personal Informatics Tool for Self-management of Rheumatoid Arthritis ........................................... 232
    Ankit Gupta, Xin Tong, Chris Shaw, Linda Li, and Lynne Feehan

A Crowdsourcing-Based Social Platform to Increase a Community’s Sustainability and Well-Being ........................................... 241
    Kota Gushima, Mizuki Sakamoto, and Tatsuo Nakajima

Estimation of Floor Reaction Force During Walking Using Physical Inertial Force by Wireless Motion Sensor ........................................... 249
    Atsushi Isshiki, Yoshio Inoue, Kyoko Shibata, and Motomichi Sonobe

Development of Content for an ICT Screening Program Based on the Emotional and Behavioral Disorder Questionnaire .......................... 255
    Hyung Sook Kim, Chan-Ik Park, David O’Sullivan, and Jeessun Lee

Development of a Human-Seat Cushion Finite Element Model for Sitting Comfort Analysis ................................................................. 261
    Xianxue Li, Li Ding, Xianchao Ma, Baofeng Li, and Haiyan Liu

Study on the Interactivity of Medication Behavior in Children’s Group Environment .............................................................. 267
    Miao Liu, Zhaoyang Sun, and Tao Xiong

Framework of Health Monitoring Service for the Elderly Drivers Community .............................................................. 275
    Se Jin Park, Murali Subramaniyam, Seunghee Hong, and Damee Kim

Adaptation Monitoring System Preventing Fall Down from a Bed for Individual Difference of Behavior ........................................... 280
    Hironobu Satoh and Kyoko Shibata

Development of an Interactive Social Tool for Mexican Young Adults to Lower and Prevent Overweight and Obesity .......................... 285
    Diana M. Sepúlveda, César Delgado, Luis Alvarado, and Sergio Zepeda
Wellness Programs: Wearable Technologies Supporting Healthy Habits and Corporate Costs Reduction .......................................................... 293
Marcos Souza, Taynah Miyagawa, Paulo Melo, and Francimar Maciel

Participatory Design of Vaccination Services with Less-Literate Users ........ 301
Shyama V.S., Ulamba Hirom, Sylvan Lobo, Sujit Devkar, Pankaj Doke, and Nikita Pandey

Affordance of Real-Time Personalization and Adaptation of Hearing Aid Settings .......................................................... 309
Qi Yang, Shira Hahn, Bill Chang, Almer van den Berg, and Greg Olsen

Design and Implementation of Smartphone Application for Measurement and Management of Depressive Emotions in Adolescents Using Cognitive Behavioral Therapy .................................................. 317
Jung-Sun Yoo, In-Sook Kim, and Jung-A Gwon

Smart Environments

Rist: An Interface Design Project for Indoor Navigation. .......................... 327
Meeshu Agnihotri, Reema Upadhyaya, Katherine Kenna, and Chen-Dah Chiang

Mobile App for a GPS-Based Location-Specific Communication System:
“Ninja Messenger” ........................................................................ 335
Riya Banerjee and Yugo Takeuchi

Design for Indoor Navigation: CROSSFLOW for Multiple Simultaneous Pedestrians in Public Spaces .................................................. 341
Han Cao

Human-House Interaction Model Based on Artificial Intelligence for Residential Functions .......................................................... 349
Brendel Francisco Lima Santos, Iury Batista de Andrade Santos, Maurício José Miranda Guimarães, and Alcides Xavier Benicasa

A Proposal for the “Cariño Index”: A New Coordination Index Based on Weather Conditions .................................................. 357
Akari Fujiwara and Katsuhiko Ogawa

Proposal of Internet Radio Walking Around Street While Listening to Voice of Virtual Idols .................................................. 366
Shiori Furuta and Katsuhiko Ogawa

Classification of Synchronous Non-parallel Shuffling Walk for Humanoid Robot .................................................. 374
Masanao Koeda, Daiki Sugimoto, and Etsuko Ueda
Case Representation of Daily Routine Data Through the Function Behavior Structure (FBS) Framework .................................................. 382
 Injung Lee, Taeha Yi, Jimin Rhim, Amartuvshin Narangerel, Danial Shafiei Karaji, and Ji-Hyun Lee

Indoor Navigation Aid System Using No Positioning Technique for Visually Impaired People ................................................................. 390
 Yeonju Oh, Wei-Liang Kao, and Byung-Cheol Min

SmartResponse: Emergency and Non-emergency Response for Smartphone Based Indoor Localization Applications ........................................ 398
 Manoj Penmetcha, Arabinda Samantaray, and Byung-Cheol Min

Human Algorithm: How Personal Reflection of Data Agents Improves Crowdsourcing Data Collection in a Smart City Planning Study .................. 405
 Jue Ren, Youyang Hou, Tat Lam, and Yang Yang

Face Recognition Based on Adaptive Singular Value Decomposition in the Wavelet Domain ................................................................. 413
 Jing-Wein Wang and Tzu-Hsiung Chen

Biometric Identification Using Video of Body Silhouette Captured from Overhead .................................................................................... 419
 Hiro-Fumi Yanai and Shunsuke Kouno

Mobile Interaction

Interaction Modalities for Augmented Reality in Tablets for Older Adults . . 427
 Ana Georgina Guerrero Huerta, Erika Hernández Rubio, and Amilcar Meneses Viveros

ElectAR, an Augmented Reality App for Diagram Recognition. ............... 435
 Abián Hernández Mesa, M. Peña Fabiani Bendicho, and Jorge Martín-Gutiérrez

Explore the Differences Between Iphone7 Camera Interaction and User Habits ................................................................................ 441
 Bin Jiang and Tongtong Liu

Design of Tangible Programming Environment for Smartphones ............ 448
 Yasushi Kambayashi, Kenshi Furukawa, and Munehiro Takimoto

An Analysis of Usage and Attitude for Mobile Video Service in Korea ........ 454
 Min-Jeong Kim

XX Contents – Part II
The 60 Seconds Guestbook – An Auditory Place Media for Guesthouse Residents ........................................... 461  
*Chia-Lung Lee and Katsuhiko Ogawa*

Investigation of Smartphone Use While Walking and Its Influences on One’s Behavior Among Pedestrians in Taiwan ........................................... 469  
*Jun-Ming Lu and Yi-Chin Lo*

Understanding Modern Audience in Traditional Settings .............................. 476  
*Asreen Rostami, Christoffer Cialec, and Gabriel Werlinder*

Development of a User Participatory Mobile App to Promote a Local Tourist Attraction: The Okayama Korakuen Navi App .................................................. 481  
*Wangmi Seok and Akihiko Kasw*

Evaluation of Information Presentation with Smartphone at History Museum by Eye Tracking ........................................... 489  
*Honami Take and Kiyoko Yokoyama*

Wrist Watch Design System with Interactive Evolutionary Computation .... 497  
*Hiroshi Takenouchi and Masataka Tokumaru*

Towards Prediction of User Experience from Touch Interactions with Mobile Applications ........................................... 505  
*Carola Trahms, Sebastian Möller, and Jan-Niklas Voigt-Antons*

Research on Interactive Design of Mobile Payment Based on Embodied Cognition ........................................... 513  
*Qi Wang and Zhao Hui Huang*

**Visual Design and Visualization**

Exploring of the Barrier-Free Design for Visual Impairment in Graphical User Interface Design ........................................... 523  
*Yilin Chai and Ying Cao*

Research on the Experiential Communication of Digital Humanities and Information Visualization: A Case Study of Iconography Measurement ........................................... 534  
*Zhigang Chen and Jing Ma*

Optimal Design of the Front Face of Minicars Based on Analytic Hierarchy Process ........................................... 543  
*Wenjie Deng, Xinhui Kang, and Congru Zhang*

A Visualization System for Traffic Violation Using H2O Random Forests . . 550  
*Chyi-Ren Dow, Zhe-Rong Lin, and Kuan-Chieh Wang*
Transportation CMF Design Strategy Based on Regional Culture ............ 555
Bin Jiang and Bin Geng

Negar Kaghazchi, Azusa Yoshii, Sachiko Kodama, and Masakatsu Kaneko

Humanizing the Machine: Basic Communication for Unskilled Operators ...... 569
Robert Lightfoot, Bruce Gooch, and Robert Michael Fowler

An Investigation into the Key Factors to Improve the Attractiveness of Modular Furniture in the Living Environment of China’s Metropolitan Migrants .......................................................... 575
Miao Liu, Zhaoyang Sun, Xinning Guo, Xue Chen, and Ziwei Liu

The Interaction of Casual Users with Digital Collections of Visual Art. An Exploratory Study of the WikiArt Website ................................. 583
Lucia Marengo, György Fazekas, and Anastasios Tombros

Interactive Image Search System Based on Multimodal Analogy ............... 591
Kosuke Ota, Keiichiro Shirai, Hidetoshi Miyao, and Minoru Maruyama

Preliminary Survey for Multigraph Integration and Visualization Framework ................................................................. 597
Ryosuke Saga

A Study on the Relationship Between Form Features and Images of Concept Bicycles Using the Theory of Archetype ................................. 602
Meng-Dar Shieh, Fang-Chen Hsu, and Chi-Wei Huang

Study of Color Emotion Impact on Leisure Food Package Design ................ 612
Tian-yu Wu, Ya-jun Li, and Yan Liu

Social Issues and Security in HCI

Hacking the Body 2.0: Ethics in Wearable Tech, Etextiles Design and Data Collection in Performance ......................................................... 623
Camille Baker and Kate Sicchio

I Am Ok, the Material’s Not: A Transactional Analysis of Information Security Education Material for Swedish Elementary School Students ...... 628
Stewart Kowalski, Tina Andersson, and Sabina Windahl

The Rise and Proliferation of Live-Streaming in China: Insights and Lessons ................................................................. 632
Jinglan Lin and Zhicong Lu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Are Social Capital and Parental Mediation Associated</td>
<td>638</td>
</tr>
<tr>
<td>with Cyberbullying and Cybervictimization Among Youth</td>
<td></td>
</tr>
<tr>
<td><em>Johanna Sam, Pamela Wisniewski, Heng Xu, Mary Beth Rosson,</em></td>
<td></td>
</tr>
<tr>
<td><em>and John M. Carroll</em></td>
<td></td>
</tr>
<tr>
<td>Parental Controls: Oxymoron and Design Opportunity</td>
<td>645</td>
</tr>
<tr>
<td><em>Diane J. Schiano and Christine Burg</em></td>
<td></td>
</tr>
<tr>
<td>Establish Security Psychology – How to Educate and Training</td>
<td>653</td>
</tr>
<tr>
<td>for End Users</td>
<td></td>
</tr>
<tr>
<td><em>Katsuya Uchida</em></td>
<td></td>
</tr>
<tr>
<td>Decision Tree Analysis on Environmental Factors of Insider Threats</td>
<td>658</td>
</tr>
<tr>
<td><em>Michihiro Yamada, Koichi Niihara, and Hiroaki Kikuchi</em></td>
<td></td>
</tr>
<tr>
<td>Evaluation of Accessibility of University Websites: A Case from Turkey</td>
<td>663</td>
</tr>
<tr>
<td><em>Zehra Yerlikaya and Pınar Onay Durdu</em></td>
<td></td>
</tr>
<tr>
<td><strong>Author Index</strong></td>
<td>669</td>
</tr>
</tbody>
</table>
## Contents – Part I

### Design and Evaluation Methods, Tools and Practices

<table>
<thead>
<tr>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing and Evaluating a Thai Website Accessibility Checker</td>
<td>3</td>
</tr>
<tr>
<td><em>Kewalin Angkananon, Mike Wald, and Piyabud Ploadaksorn</em></td>
<td></td>
</tr>
<tr>
<td>Usability Tool to Support the Development Process of e-Commerce Website</td>
<td>11</td>
</tr>
<tr>
<td><em>T.P. Anjos and L.A. Gontijo</em></td>
<td></td>
</tr>
<tr>
<td>Assessing Personality Differences in Human-Technology Interaction: An Overview of Key Self-report Scales to Predict Successful Interaction</td>
<td>19</td>
</tr>
<tr>
<td><em>Christiane Attig, Daniel Wessel, and Thomas Franke</em></td>
<td></td>
</tr>
<tr>
<td>Exploring the Building Blocks of Personas for Children with Autism Spectrum Disorders</td>
<td>30</td>
</tr>
<tr>
<td><em>Ayşe Naciye Çelebi Yılmaz</em></td>
<td></td>
</tr>
<tr>
<td>Mass Customized Knowledge Management: A Project for Adequate and Dynamic Knowledge Transfer for Small and Medium Enterprises</td>
<td>37</td>
</tr>
<tr>
<td><em>Michael Becker, Stephan Klingner, Julia Friedrich, Frederik Kramer, Martin Schneider, and Klaus-Peter Fähnrich</em></td>
<td></td>
</tr>
<tr>
<td>Design for Inclusion. From Teaching Experiences to Social Changes</td>
<td>44</td>
</tr>
<tr>
<td><em>Giuseppe Di Bucchianico</em></td>
<td></td>
</tr>
<tr>
<td>Usability Methods and Evaluation Criteria for Published Clinical Guidelines on the Web: A Systematic Literature Review</td>
<td>50</td>
</tr>
<tr>
<td><em>Soudabeh Khodambashi and Øystein Nytrø</em></td>
<td></td>
</tr>
<tr>
<td>The Assessment Tool for User Perceived Interactivity from ACG Website Interactivity on Imagination</td>
<td>57</td>
</tr>
<tr>
<td><em>Juihsiang Lee</em></td>
<td></td>
</tr>
<tr>
<td>From Spectator to Co-creator for Hybrid Social Space: A New Taxonomy for Participatory Social Interaction and Co-creation</td>
<td>66</td>
</tr>
<tr>
<td><em>Yun Tae Nam and Je-ho Oh</em></td>
<td></td>
</tr>
<tr>
<td>Understanding Game Design for the Development of a Game Environment</td>
<td>73</td>
</tr>
<tr>
<td><em>André Salomão, Flávio Andaló, and Milton Luiz Horn Vieira</em></td>
<td></td>
</tr>
<tr>
<td>Communication Model of Web Accessibility</td>
<td>80</td>
</tr>
<tr>
<td><em>Takayuki Watanabe</em></td>
<td></td>
</tr>
</tbody>
</table>
A Study of the Team Management in Design Organizations 88
Shih-Hsi Yang and Wen-Tsung Huang

Novel Interaction Techniques and Devices

Japanese Sign Language Recognition Based on Three Elements of Sign Using Kinect v2 Sensor 95
Shohei Awata, Shinji Sako, and Tadashi Kitamura

Immersive 3D Environment for Data Centre Monitoring Based on Gesture Based Interaction 103
Giannis Drossis, Chryssi Birliraki, George Margetis, and Constantine Stephanidis

Interactive Evolutionary Computation Using Multiple Users’ Gaze Information 109
Minatsu Fujisaki, Hiroshi Takenouchi, and Masataka Tokumaru

Effects of Electrode Configuration on Pattern Recognition Based Finger Movement Classification 117
Jiayuan He, Xiangyang Zhu, and Ning Jiang

Prompting – A Feature of General Relevance in HCI-Supported Task Workflows 123
Thomas Herrmann and Jan Nierhoff

Interaction with Three Dimensional Objects on Diverse Input and Output Devices: A Survey 130
Adrian Heinrich Hoppe, Florian van de Camp, and Rainer Stiefelhagen

Use of Vibration for Touch Pen to Provide the Feel of Writing on Paper 140
Makio Ishihara, Ayaka Imato, and Yukio Ishihara

Enhancement of ANN-Based Offline Hand Written Character Recognition Using Gradient and Geometric Feature Extraction Techniques 145
Y.A. Joarder, Paresh Chandra Barman, and Md Zahidul Islam

Shortening Selection Time Using Plural Cursor in Multi-display Environment and Its Preliminary Evaluation 152
Yuki Mako and Makio Ishihara

Creating a Playful Digital Catalogue System Using Technology-Enhanced Physical Objects 158
George Margetis, Dimitris Grammenos, George Paparoulis, and Constantine Stephanidis
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Classification of Eye Blinks and Eye Movements for an Input Interface Using Eye Motion</td>
<td>164</td>
</tr>
<tr>
<td>Shogo Matsuno, Masatoshi Tanaka, Keisuke Yoshida, Kota Akehi, Naoaki Itakura, Tota Mizuno, and Kazuyuki Mito</td>
<td></td>
</tr>
<tr>
<td>Shuhei Matsuyama and Mitsuhiko Karashima</td>
<td></td>
</tr>
<tr>
<td>A Pen Gesture-Based Editing System for Online Handwritten Objects on a Pen Computer</td>
<td>177</td>
</tr>
<tr>
<td>Hidetoshi Miyao, Keisuke Nakamura, Shinya Nakazawa, and Minoru Maruyama</td>
<td></td>
</tr>
<tr>
<td>AnywhereTouch: Finger Tracking Method on Arbitrary Surface Using Nailed-Mounted IMU for Mobile HMD</td>
<td>185</td>
</tr>
<tr>
<td>Ju Young Oh, Jun Lee, Joong Ho Lee, and Ji Hyung Park</td>
<td></td>
</tr>
<tr>
<td>Vibration Ring Device Which Supports Deaf Students to Learn How to Use Illustrator: SZCAT: Synchronized Click Action Transmitter</td>
<td>192</td>
</tr>
<tr>
<td>Takuya Suzuki, Makoto Kobayashi, and Yuji Nagashima</td>
<td></td>
</tr>
<tr>
<td>Creating a Gesture-Speech Dataset for Speech-Based Automatic Gesture Generation</td>
<td>198</td>
</tr>
<tr>
<td>Kenta Takeuchi, Souichirou Kubota, Ketsuke Suzuki, Dai Hasegawa, and Hiroshi Sakuta</td>
<td></td>
</tr>
<tr>
<td>Psychophisiological Measuring and Monitoring</td>
<td></td>
</tr>
<tr>
<td>Driver’s Modeling with System Identification Algorithm to Aim</td>
<td>205</td>
</tr>
<tr>
<td>Hirotoshi Asano, Kiwamu Goto, and Tota Mizuno</td>
<td></td>
</tr>
<tr>
<td>Wearables and User Interface Design: Impacts on Belief in Free Will</td>
<td>210</td>
</tr>
<tr>
<td>D.A. Baker</td>
<td></td>
</tr>
<tr>
<td>Stress Measurement and Inducement in Experiments with Low Cost Flight Simulator for Testing of General Aviation Pilots</td>
<td>218</td>
</tr>
<tr>
<td>Ondřej Bruna, Tomáš Levora, and Jan Holub</td>
<td></td>
</tr>
<tr>
<td>A Portable and User Friendly REM Sleep Detection System Based on Differential Movement of Eyeball Using Optical Sensors</td>
<td>224</td>
</tr>
<tr>
<td>Chi Yeon Hwang, Geun do Park, Hyang Jun Jeong, In Gyu Park, Yun Joong Kim, Hyeo-II Ma, and Unjoo Lee</td>
<td></td>
</tr>
</tbody>
</table>
Psychophysiological and Intraoperative AEPs and SEPs Monitoring for Perception, Attention and Cognition .......................................................... 229

Sergey Lytaev, Mikhail Aleksandrov, and Aleksei Ulitin

Development of Device for Measurement of Skin Potential by Grasping of the Device ................................................................. 237

Tota Mizuno, Shogo Matsuno, Kota Akehi, Kazuyuki Mito, Naoaki Itakura, and Hirotoshi Asano

Evaluating NeuroSky’s Single-Channel EEG Sensor for Drowsiness Detection ................................................................. 243

Kishan Patel, Harit Shah, Malcolm Dcosta, and Dvijesh Shastri

Neurophysiological Indices of Human Social Interactions Between Humans and Robots ................................................................. 251

S.J. Smith, B.T. Stone, T. Ranatunga, K. Nel, T.Z. Ramsoy, and C. Berka

Study on the Influence of Drivers’ Physiological Characteristics of Urban Bus Stop ................................................................. 263

Fengyuan Wang, Xiaoting Chen, Gang Sun, and Xing Liang

A Functional Near-Infrared Spectroscopy Study of Auditory Working Memory Load ................................................................. 273

Shih-Min Wu, Hsien-Ming Ding, and Yi-Li Tseng

Perception, Cognition and Emotion in HCI

Analysis of Paradoxical Phenomenon Caused by Presenting Thermal Stimulation on Three Spots ................................................................. 281

Keisuke Arai, Satoshi Hashiguchi, Fumihisa Shibata, and Asako Kimura

Gaze Behavior and Emotion of Crane Operators for Different Visual Support System ................................................................. 287

Jouh Yeong Chew, Koichi Ohtomi, and Hiromasa Suzuki

A Study on the Differences Among M3D, S3D and HMD for Students with Different Degrees of Spatial Ability in Design Education .......................... 293

Po-Ying Chu, Li-Chieh Chen, Hsiao-Wen Kung, and Shih-Jen Su

Mirrored Perception Cognition Action Model in an Interactive Surgery Assist System ................................................................. 300

Jiachun Du, Thomas van Rooij, and Jean-Bernard Martens

Research on Human Acceptability of Household Environment Temperature Fluctuation ................................................................. 307

Huimin Hu, Rui Wang, Chaoyi Zhao, Hong Luo, Aixian Li, Li Ding, and Yifen Qiu
Continuous Affect Rating in Cartesian Space of Pleasure and Arousal
Scale by Joystick Without Visual Feedback ........................................... 316
Mitsuhiko Karashima and Hiromi Nishiguchi

Attention Value of Motion Graphics on Digital Signages ..................... 324
Tsubasa Kato and Nahomi Maki

Towards a Cognitive Agility Index: The Role of Metacognition in Human
Computer Interaction ................................................................. 330
Benjamin J. Knox, Ricardo G. Lugo, Øyvind Jøsok, Kirsì Helkala,
and Stefan Süttetlin

A Practice for the Certification of Minimum Flight Crew Workload .......... 339
Haiyan Liu, Xianchao Ma, Yinbo Zhang, Zhefeng Jin, and Dayong Dong

Investigation of Facial Region Extraction Algorithm Focusing on
Temperature Distribution Characteristics of Facial Thermal Images .... 347
Tomoyuki Murata, Shogo Matsuno, Kazuyuki Mito, Naoaki Itakura,
and Tota Mizuno

Change in Subjective Evaluation of Weight by the Proteus Effect ............ 353
Kengo Obana, Dai Hasegawa, and Hiroshi Sakuta

Making Implicit Knowledge Explicit – Acquisition of Plant Staff’s
Mental Models as a Basis for Developing a Decision Support System .... 358
Dorothea Pantförd, Julia Schaupp, and Birgit Vogel-Heuser

Eye Contact Detection via Deep Neural Networks ............................ 366
Viral Parekh, Ramanathan Subramanian, and C.V. Jawahar

Let Our Mind Wander: Employing IT-Induced Incubations
to Enhance Creativity ............................................................. 375
Xixian Peng, Xinwei Wang, and Hock Hai Teo

Guiding Visual Attention Based on Visual Saliency Map
with Projector-Camera System ..................................................... 383
Hironori Takimoto, Katsumi Yamamoto, Akihiro Kanagawa,
Mitsuyoshi Kishihara, and Kensuke Okubo

Detection System of Unsafe Driving Behavior Significant for Cognitive
Dysfunction Patients ............................................................... 391
Tomoji Toriyama, Akira Urashima, and Satoshi Yoshikuni

Measurement of Eyeblink Frequency Variation for Cognitive Dysfunction
Patients’ Safe Driving Skill Evaluation ......................................... 397
Akira Urashima, Yoshiki Otsuki, and Tomoji Toriyama
Experimental Research on the Armored Crew’s Depth Perception

Qianxiang Zhou, Jintao Wu, and Zhongqi Liu

Data Analysis and Data Mining in Social Media and Communication

Instructional Information System for the Introduction of Data Journalism Techniques Based on User Centered Design Methodology

Belén Alazañez-Cortés, Zayra Montserrat Miranda-Aguirre, Jocelyn Lizbeth Molina-Barradas, Erick Monroy-Cuevas, Rocio Abascal-Mena, Rodrigo Gómez-García, and Román Esqueda-Atayde

Implicit Evaluation of User’s Expertise in Scientific Domains

Alessandro Bonifacio, Claudio Biancalana, Fabio Gasparetti, Alessandro Micarelli, and Giuseppe Sansonetti

Breaking News Commentary: Users’ Reactions to Terrorist Attacks in English-Speaking Twittersphere

Kaja J. Fietkiewicz and Aylin Ilhan

Does Negative News Travel Fast? Exploring the Effect of News Sentiment on Interactive Spiral

Jie Gu, Jing Tian, Xiaolun Wang, and Hong Ling

Analyzing Users’ Search Patterns to Explore Topic Knowledge from Aggregated Search Results

Yen-Chun Huang, Yu-Ping Ho, and I-Chin Wu

Chat Support System to Recall Past Conversational Topics Using Tags

Junko Itou, Rina Tanaka, and Jun Munemori

Collection of Example Sentences for Non-task-Oriented Dialog Using a Spoken Dialog System and Comparison with Hand-Crafted DB

Yukiko Kageyama, Yuya Chiba, Takashi Nose, and Akinori Ito

Combining Sentimental and Content Analysis for Recognizing and Interpreting Human Affects

Stefanie Niklander and Gustavo Niklander

Emotional Computing and Discourse Analysis: A Case Study About Brexit in Twitter

Stefanie Niklander

Automatic Quantification of the Veracity of Suicidal Ideation in Counseling Transcripts

Omar Oseguera, Alex Rinaldi, Joann Tuazon, and Albert C. Cruz
End-to-End Dialogue with Sentiment Analysis Features

Alex Rinaldi, Omar Oseguera, Joann Tuazon, and Albert C. Cruz

Avatar Life-Review: Seniors Reminiscing Through Virtual Bodies

Semi Ryu

HCI Research and History: Special Interests Groups on Facebook as Historical Sources

Mechtild Stock

Beyond Retail Therapy: Can the Relationship Between Affective Data & Consumer Behavior Be Utilized to Develop User-Directed E-Commerce Personalization?

Isabel Wellbery, Franziska Susanne Roth, and Thomas Fortmann

Ergonomics and Models in Work and Training Support

Intuitive Real-Time Multidimensional Diagnostic Ultrasound Image Optimization Technology

Giampaolo Borreani, Carlo Biagini, Roberto Pesce, Luca Bombino, and Leonardo Forzoni

An Analysis and Evaluation Procedure in Civil Aircraft Flight Deck Design

Dayong Dong, Baofeng Li, Haiyan Liu, Wenjun Dong, Hongtao Liu, and Zhefeng Jin

Investigation on Driving Habits of Chinese Truck Driver

Junmin Du, Hui Lu, Weiyu Sun, Xin Zhang, Huimin Hu, and Yang Liu

Formulation of Diagnostic Expertise in Oral Health Care and Its Application to Clinical Education

Kyoko Ito, Haruki Sao, Takashi Nagamatsu, Junko Nagata, and Kenji Takada

Assessment of the Working Chair Using Affects the Whole Service Process in B Ultrasonic Examination

Xinxiong Liu, Daojun Qian, Lei Wu, and Jie Xu

Finding 3D CAD Data Production Methods that Work for People with Visual Impairments

Kazunori Minatani

Evaluating 360-Virtual Reality for Mining Industry’s Safety Training

Shiva Pedram, Pascal Perez, Stephen Palmisano, and Matthew Farrelly
Hearing Finds and Posture in Workers of the Improvement of the Manioc in Sergipe State, Brazil ................................................................. 562
   Tereza Raquel Ribeiro de Sena, Maria Goretti Fernandes, Marcos André Santos Guedes, and Angelo Roberto Antoniolli

Single Trial Analysis of Body Sway Caused by Several Matrix-Shaped Tactile Stimuli on Body Trunk ......................................................... 566
   Masaki Terada and Masafumi Uchida

Formalization Modeling of Maintenance Based on Agent ....................... 575
   Shu-jie Tian, Bo Wang, Li Wang, and Dan Xu

Outside the Virtual Screen: A Tangible Character for Computer Break ...... 583
   Sy-Chyi Wang, Jin-Yuan Chern, Chung-Ping Young, Wei-Hsin Teng, and Xiao-Yi Xiong

Ambidexterity in Mobile Collaboration: Balancing Task- and Socialization-Oriented Communication in Team Member Interaction ................. 588
   Xiaolun Wang, Jie Gu, Jing Tian, and Yunjie Xu

Author Index .......................................................................................... 597
HCI International 2017 - Posters' Extended Abstracts
19th International Conference, HCI International 2017,
Vancouver, BC, Canada, July 9-14, 2017, Proceedings,
Part II
Stephanidis, C. (Ed.)
2017, XXXII, 674 p. 303 illus., Softcover
ISBN: 978-3-319-58752-3