



ACHI 2022

The Fifteenth International Conference on Advances in Computer-Human
Interactions

June 26th – 30th, 2022

Porto, Portugal

ACHI 2022 Editors

Okky Dicky Ardiansyah Prima, Iwate Prefectural University, Japan

Weizhi Meng, Technical University of Denmark, Denmark

Hisayoshi Ito, Iwate Prefectural University, Japan

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2022) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed with permission by Curran Associates, Inc. (2023)

International Academy, Research, and Industry Association (IARIA)
412 Derby Way
Wilmington, DE 19810

Phone: (408) 893-6407
Fax: (408) 527-6351

petre@iaria.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

Do Digital Human Facial Expressions Represent Real Human's? <i>Shiori Kikuchi, Oky Dicky Ardiansyah Prima, and Hisayoshi Ito</i>	1
Detection of Pesticide Mist Distribution to Avoid Spray Drift <i>Chaitali Dutta, Oky Dicky Ardiansyah Prima, Kanayo Ogura, Koichi Matsuda, and Shoichi Yuki</i>	6
3D Human Pose Estimation using a Stereo Camera towards Monitoring of Drug Picking Tasks <i>Yuta Ono and Oky Dicky Ardiansyah Prima</i>	11
Assessment of Differences in Human Depth Understanding Between Stereo and Motion Parallax Cues in Light-Field Displays <i>Raymond Swannack and Oky Dicky Ardiansyah Prima</i>	18
Detection of Pinbones in Japanese Shime-saba <i>Hisayoshi Ito, Oky Dicky Ardiansyah Prima, and Takehiro Sasaki</i>	22
Egg Surface Inspection Using Infrared Transmitted Light Images <i>Hisayoshi Ito and Oky Dicky Ardiansyah Prima</i>	26
Relationship between 3D Eye-Gaze and the TrueDepth Measured by Vive Pro Eye <i>Kenta Kato and Oky Dicky Ardiansyah Prima</i>	30
RIDES: Realistic and Immersive Dental Education Simulation Using Virtual Reality and Haptic Device Implementation <i>Casey Melrose, Daniel Briz, Charlotte Atwill, Hao Huang, Andrew Marlow, Markus Santoso, and Cortino Sukotjo</i>	35
Keyword Extraction for Local Foods from Restaurant Menus of Roadside Stations <i>Yoko Nishihara, Hirofumi Noguchi, and Ryosuke Yamanishi</i>	38
Integrating Active Learning and Analysis with Near-Infrared Spectroscopy into Virtual ESP Classes <i>Rumi Tobita</i>	42
Suitability of Immersive 2D Environments for Tertiary Education using the Gather Environment as an Example <i>Gerhard Hube and Kevin Pfeffel</i>	44
Comparison of Vibrotactile Display and Pseudo-mastication Sound Display on Food Texture Perception <i>Yuki Nishi and Satoshi Saga</i>	53
Predicting Rapid Shifts in Cognitive Resource Allocation <i>Justin Brooks, Philip Dyer, Katherine Cox, Jonroy Canady, Kanika Bansal, and Javier Garcia</i>	59

Common Usability Issues on University's Websites <i>Reem Alsaeed and Mohammad Mahdi Hassan</i>	67
Designing Uburu: The Alpha Stage: Executive Function Rehabilitation Application for Mild Traumatic Brain Injury <i>Akuadasuo Ezenyilimba, Jennifer Wethe, Nancy J. Cooke, and Troy McDaniel</i>	73
Unity-Warmth: Positional and Thermal Sensation Presentation System Through a Display <i>Suguru Sato, Kagura Itokazu, Yuhei Akamine, Yui Kita, and Emi Tamaki</i>	78
Subliminal Warnings – A New Approach to Change Users' Behavior <i>Mini Zeng, Feng Zhu, and Sandra Carpenter</i>	88
Automated Visual Verification of Avionics Cockpit Displays <i>Muhammed Onur Gungor and Gokhan Ince</i>	98
PoseToCode: Exploring Design Considerations toward a Usable Block-Based Programming and Embodied Learning System <i>Thomas Groechel, Nisha Chatwani, Chloe Kuo, and Maja Mataric</i>	104
Analysis of Personal Data Visualisation Reviews on Mobile Health Apps <i>Yasmeen Anjeer ALshehhi, Mohamed Abdelrazek, and Alessio Bonti</i>	111