Contents

Product Development and Design Process

Exploring Two Design Processes: Slow and Fast ................................. 3
Cliff Shin and Joyce Thomas

Rematerializing the User Interface of a Digitized Toy Through Tokens: A Comparative User Study with Children Aged Five to Six .... 16
Marieke Van Camp, Lukas Van Campenhout, and Guido De Bruyne

Analysis of Emotion and Cultural Background on Affective Design Process .......................................................... 25
Amic G. Ho

Design and Validation of Affective Warning Pictorials on Alcohol Container Labels ........................................... 34
Waratta Authayarat, Papawee Kasornsuwan, and Arisara Jiamsanguanwong

Design Changing a Traditional Product in a Contemporary Way .... 43
Isabel Bieger, Cristina Carvalho, and Gianni Montagna

Emotional Engineering

Semantic Influence of the Radiator Grille on Vehicle Front Design in the Course of Current EV-Design .......................... 53
Daniel Holder, Tobias Benz, and Thomas Maier

A Mahalanobis Taguchi Approach to Human Motion Control .... 65
Shuichi Fukuda

Eye-Tracking Analysis of User Behavior with an Active Display Interface ............................................................... 72
Teruaki Ito and Tomio Watanabe
Experimental Study on Color Preference and Visual Fatigue Against LED Lighting .......................... 78
Keiichi Muramatsu, Kazunori Kaede, Eiichiro Tanaka, and Keiichi Watanuki

Emotional Responses of the Disabled Towards Wheelchairs .............. 86
Mohamed Mokdad, Bouhafs Mebarki, Lahcene Bouabdellah, and Ibrahim Mokdad

Emotional Values of Ceramic Material for Product Design ............... 97
Dosun Shin and Samuel Chung

Research on the Space-Leaving Technique in Web Design ............. 106
Huaxiang Yuan and Xuewen Ji

Emotion and the Qualitative Side of Experience

The Pain and Pleasure of Autonomy: The Role of Negative Emotion in Serviced Reality Storytelling ...................... 117
Miso Kim and Youngsoo Lee

Soma-Deep as a Marker for Idealized Experience ...................... 127
Stephen Neely

Design for Dignity and Procedural Justice ............................. 135
Margaret Hagan and Miso Kim

Ritual Design: Crafting Team Rituals for Meaningful Organizational Change ..................................... 146
Fatih Kursat Ozenc and Margaret Hagan

Material and Texture Exploration

New Typographic Experience in the Post-digital Age with 3D Printing and Ceramics ....................................... 161
Taekyeom Lee

The Black Color of Product Design and Packaging Research ........ 171
Lung-Wen Kuo and Chih-Chun Lai

Research on the Application of User Experience Design in Agricultural Product Packaging Design ..................... 182
Lvhuayang Feng, Xiao Zhang, and Delai Men

Analysis of Affective Evaluation for Material Perception of Resin Surfaces: Combined Effect of Tactile Sensation and Hue .................. 190
Michiko Ohkura, Wataru Morishita, Ryuji Miyazaki, Masato Takahashi, Hiroko Sakurai, Kiyotaka Yarimizu, and Akira Nakahara
Designing Affective and Pleasurable Design Interactions

Influence of Individual Fashion Item Images on the Image of Coordinates ............................................... 201
Miu Sato and Toshikazu Kato

Estimation of Unconscious Preference Judgment with Near-Infrared Spectroscopy ................................. 208
Haruka Tanida and Toshikazu Kato

Analysis of Change in Purchasing Motivation by Tone of Product-Recommendation Agent in Electronic Commerce Site ........ 215
Masanari Toriba and Toshikazu Kato

Interference Thermal Sensation Simulation Using Visual and Auditory Stimuli ...................................... 221
Tatsuya Amano, Takashi Sakamoto, Toru-nakata, and Toshikazu Kato

Effectiveness of Communicating Personalized Values Related to Physical Exercise to Enhance Motivation .... 227
Hitoshi Urata, Takashi Sakamoto, and Toshikazu Kato

Research on Memory Factors of City Souvenir .................... 234
Ziheng Zhang, Jianxin ChengI, Wei Ding, Junnan Ye, Tengye Li, and Zhiye Yu

Affective Value and Kawaii Engineering

Relationship Between Physical Attributes of Spoon Designs and Eye Movements Caused by Kawaii Feelings ........ 245
Tipporn Laohakangvalvit and Michiko Ohkura

Are Kawaii Products Valuable to Chinese Customers? .............. 258
Pei-Luen Patrick Rau, Nan Qie, and Chien-Wen Tung

How to Model Value-Creating Communication: Coaching Process as an Example ..................................... 266
Yuri Hamada and Hiroko Shoji

Participation in a Virtual Reality Concert via Brainwave and Heartbeat .................................................. 276
Ryota Horie, Minami Wada, and Eri Watanabe

Evaluation of Immersive Feeling in VR System with HMD by fNIRS Measurement ................................ 285
Kazuki Miyamoto, Yoshiki Koinuma, Shinichiro Kanoh, and Michiko Ohkura
Evaluation of “Feelings of Excitement” Caused by a VR Interactive System with Unknown Experience Using ECG. ........................ 292
Kodai Ito, Shigeki Usuda, Kiryu Yasunaga, and Michiko Ohkura

Kansei Engineering

Measurement of Surface and Virtual Prototyping for Kansei Engineering ........................................ 305
Tatsuro Matsubara, Shigekazu Ishihara, Yukihiro Matsubara, and Mitsuo Nagamachi

Kansei Ergonomic Study of Body Brush Development ................. 318
Keiko Ishihara, Kosuke Morinaga, Masayuki Booka, Shigekazu Ishihara, and Akira Katayama

Development and Evaluation of Ankle Mobility VR Rehabilitation Game ...................................................... 325
Atsushi Kanbe, Shigekazu Ishihara, and Mitsuo Nagamachi

Persuasive Semantics of Aging Health Products Based on AHP and Kansei Engineering ....................................... 337
Yongyan Guo, Minggang Yang, and Meiyu Zhou

Development of Remote Control Unit of Domestic Water Heater by Kansei Engineering ........................................ 347
Toshio Tsuchiya

History of Kansei Engineering and Application of Artificial Intelligence .................................................. 357
Mitsuo Nagamachi

A Study on the Approach of Redesign Based on Consumer Awareness of Traditional Handicrafts, with Longevity Lock, as an Example ...... 369
Zhiye Yu, Wei Yu, Tengye Li, Zhang Zhang, and Ziheng Zhang

Integrated Design

Modeling the Relationship Between Stress and Appetite to Create a Dish Recommendation System Based on Desired Nutrients ........ 379
Hiroya Kato, Toru Nakata, and Toshikazu Kato

Assessing Symptoms of Excessive SNS Usage Based on User Behavior and Emotion: Analysis of Log Data ........................................... 387
Ploypailin Intapong, Saromporn Charoenpit, Tiranee Achalakul, and Michiko Ohkura

Transformable Camping Cart Design for a Jack Company ............. 398
Myungjin Kim, Haebin Lee, Muhammad Tufail, and KwanMyung Kim
Contents

Haebin Lee, Muhammad Tufail, Myungjin Kim, and KwanMyung Kim

The Design of Personal Protective Garments for Workplace:
An Ergonomic Radiation Protection Design Practice ...................... 416
Muhammad Tufail, Haebin Lee, Myungjin Kim, and KwanMyung Kim

Implication of User Behavior in Design Process

Memory Recall of Nouns and Adjectives Expressing
Two-Color Combinations ...................................................... 429
Saki Tomita, Takashi Sakamoto, and Toshikazu Kato

Determination of the Optimal Timing for a Relaxing Stimulus .......... 434
Yusuke Kishine, Toshikazu Kato, and Toru Nakata

Research on Attitude Accessibility in Product Design Evaluation:
Cognitive Features and Memory Network .................................. 443
Tengye Li, Jianxin Cheng, Tao Xiong, Junnan Ye, and Ziheng Zhang

Affective and Emotional Aspects of Design

Research on the Information Transmission Design of OTC Medicine
Packaging Graphic for the Elderly ............................................. 453
Xinyi Xie and Delai Men

Musical Preferences Are Influenced by Changes in Heart Rate:
A Trial Study Using Step Aerobics .......................................... 462
Takuma Oishi, Takashi Sakamoto, and Toshikazu Kato

Fitting School Buildings to the Requirements of Physically Disabled
Students in Algeria: An Ergonomic Study ................................. 470
Lahcine Bouabdellah, Houda Kharbache, Mohamed Mokdad,
and Bouhafs Mebarki

Categorization of Aesthetic Pleasure Derived Attributes:
A Cultural Perspective ......................................................... 479
Angela Henao

Research on User Experience Design Applications in Detail Designs
of Elders’ Garment Products ............................................... 489
Xiaoping Hu, Xiao Zhang, and Lyuhuayang Feng

Author Index ................................................................. 499
Advances in Affective and Pleasurable Design
Chung, W.; Shin, C.S. (Eds.)
2018, XIII, 500 p. 263 illus., Softcover
ISBN: 978-3-319-60494-7