## Table of Contents - Part V

## Adaptive, Personalised and Context-Aware Interaction

and Preliminary Usability Test	3
Unifying Conceptual and Spatial Relationships between Objects in HCI	10
Context-Aware Multimodal Sharing of Emotions	19
Supportive User Interfaces for MOCOCO (Mobile, Contextualized and Collaborative) Applications	29
RFID Mesh Network as an Infrastructure for Location Based Services for the Blind	39
An Ontology-Based Interaction Concept for Social-Aware Applications	46
Sensor-Based Adaptation of User Interface on Android Phones  Tor-Morten Grønli, Gheorghita Ghinea, and Jarle Hansen	56
Perception and BDI Reasoning Based Agent Model for Human Behavior Simulation in Complex System	62
Long-Term Study of a Software Keyboard That Places Keys at Positions of Fingers and Their Surroundings	72
Fast Dynamic Channel Allocation Algorithm for TD-HSPA System  Haidong Li, Hai-Lin Liu, and Xueyi Liang	82
Evaluating Intelligibility Usage and Usefulness in a Context-Aware Application	92

Strangers and Friends: Adapting the Conversational Style of an Artificial Agent	102
suGATALOG: Fashion Coordination System That Supports Users to Choose Everyday Fashion with Clothed Pictures	112
Interacting with a Context-Aware Personal Information Sharing System	122
Design and Evaluation of Eco-feedback Interfaces to Support Location-Based Services for Individual Energy Awareness and Conservation	132
Fuzzy Logic Approach for Adaptive Systems Design	141
Computational Vision in HCI	
Semi-supervised Remote Sensing Image Segmentation Using Dynamic Region Merging	153
Correcting Distortion of Views into Aquarium	163
A Dense Stereo Matching Algorithm with Occlusion and Less or Similar Texture Handling	171
Robust Face Recognition System Using a Reliability Feedback	178
A Developer-Oriented Visual Model for Upper-Body Gesture Characterization	186
Annotate. Train. Evaluate. A Unified Tool for the Analysis and Visualization of Workflows in Machine Learning Applied to Object Detection	196

Table of Contents – Part V	XIX
A New Real-Time Visual SLAM Algorithm Based on the Improved FAST Features	206
A Coastline Detection Method Based on Level Set	216
Tracking End-Effectors for Marker-Less 3D Human Motion Estimation in Multi-view Image Sequences	227
Kernel Based Weighted Group Sparse Representation Classifier	236
Kernel Fuzzy Similarity Measure-Based Spectral Clustering for Image Segmentation	246
Depth Camera Based Real-Time Fingertip Detection Using Multi-view Projection	254
Evaluation of Hip Impingement Kinematics on Range of Motion	262
Tracking People with Active Cameras	270
Classification Based on LBP and SVM for Human Embryo Microscope Images	280
Semantic Annotation Method of Clothing Image	289
Emotions in HCI	
Audio-Based Pre-classification for Semi-automatic Facial Expression Coding	301
Sentimental Eyes!	310

XX

Developing Sophisticated Robot Reactions by Long-Term Human Interaction	319
Hiromi Nagano, Miho Harata, and Masataka Tokumaru	020
An Awareness System for Supporting Remote Communication – Application to Long-Distance Relationships	329
Emotion Sharing with the Emotional Digital Picture Frame	339
Vision Based Body Dither Measurement for Estimating Human Emotion Parameters	346
Evaluating Emotional State during 3DTV Viewing Using Psychophysiological Measurements	353
Affect-Based Retrieval of Landscape Images Using Probabilistic  Affective Model	362
A Study on Combinative Value Creation in Songs Selection	372
The Influence of Context Knowledge for Multi-modal Affective  Annotation	381
Generation of Facial Expression Emphasized with Cartoon Techniques Using a Cellular-Phone-Type Teleoperated Robot with a Mobile Projector	391
Biophysiological Aspects of Interaction	
A Biofeedback Game for Training Arousal Regulation during a Stressful Task: The Space Investor	403
Responses Analysis of Visual and Linguistic Information on Digital Signage Using fNIRS	411

Table of Contents – Part V	XXI
A Method for Promoting Interaction Awareness by Biological Rhythm in Elementary School Children	421
Internet Anxiety: Myth or Reality?	431
Brain Function Connectivity Analysis for Recognizing Different Relation of Social Emotion in Virtual Reality	441
A Mobile Brain-Computer Interface for Freely Moving Humans  Yuan-Pin Lin, Yijun Wang, Chun-Shu Wei, and Tzyy-Ping Jung	448
The Solid Angle of Light Sources and Its Impact on the Suppression of Melatonin in Humans	454
Facial Electromyogram Activation as Silent Speech Method Lisa Rebenitsch and Charles B. Owen	464
The Impact of Gender and Sexual Hormones on Automated Psychobiological Emotion Classification	474
Evaluation of Mono/Binocular Depth Perception Using Virtual Image Display	483
Visual Image Reconstruction from fMRI Activation Using Multi-scale Support Vector Machine Decoders	491
Alterations in Resting-State after Motor Imagery Training: A Pilot Investigation with Eigenvector Centrality Mapping	498
Author Index	505