Record Nr. UNISA996574257503316 Computer-Human Interaction Research and Applications: 7th **Titolo** International Conference, CHIRA 2023, Rome, Italy, November 16-17, 2023, Proceedings, Part I / / Hugo Placido da Silva and Pietro Cipresso, editors Pubbl/distr/stampa Cham, Switzerland: ,: Springer Nature Switzerland AG, , [2023] ©2023 **ISBN** 3-031-49425-3 Edizione [First edition.] Descrizione fisica 1 online resource (XXIII, 374 p. 121 illus., 99 illus. in color.) Communications in Computer and Information Science Series;; Volume Collana 1996 Disciplina 004.019 Soggetti Human-computer interaction User interfaces (Computer systems) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Intro -- Preface -- Organization -- Invited Speakers Abstracts --Designing Transformative Experiences: Exploring the Potential of Virtual Technologies for Personal Change -- Aesthetically Resonant Multimodal Interactive Systems -- Contents - Part I -- Contents - Part II -- Invited Speaker -- Creating Human-Computer Partnerships -- 1 Introduction -- 1.1 The Cost of System-Induced Errors -- 1.2 Shaping the User's Behavior -- 1.3 Presentation Details Matter -- 1.4 Interacting with AI -- 2 Generative Theories of Interaction -- 3 Creating Effective Human-Computer Partnerships -- 3.1 Discoverability -- 3.2 Expressivity -- 3.3 Appropriability -- 3.4 Sharing Agency -- 3.5 Shaping Human and Agent Behavior -- 4 Conclusion -- References --Main Event -- Empowering Production Workers to Program Robots: A No-Code, Skill-Based Approach -- 1 Introduction -- 2 Related Work --3 An Intuitive Robotic Interface -- 3.1 A New Block-Based Programming

Interface: PrograBlock -- 3.2 A Skill-Based Architecture -- 3.3 Virtual Environment -- 3.4 Tutorials -- 4 Evaluation of the Interface -- 4.1 Participants -- 4.2 Procedure -- 4.3 Measures -- 4.4 Data Analysis --

References -- Mobile Gaming EMG-Based Brain Computer Interface --

5 Results -- 6 Discussion -- 7 Future Work -- 8 Conclusion --

Mobile Device -- 2.2 Brain Computer Interface for Gaming -- 3 Methodology -- 3.1 Mobile Gaming BCI Development -- 3.2 Participants -- 3.3 Evaluation Procedure -- 4 Results -- 4.1 MGaming EMG-BCI Version01 -- 4.2 MGaming EMG-BCI Version02 -- 5 Discussion -- 6 Conclusion and Future Work -- References -- Towards Gesture Based Assistive Technology for Persons Experiencing Involuntary Muscle Contractions -- 1 Introduction -- 2 Related Work --2.1 Gesture Classification Algorithms -- 2.2 Gesture-Based Assistive Technology. 3 Research Methodology -- 3.1 Subject Recruitment -- 3.2 Data Collection -- 3.3 Data Preprocessing -- 3.4 Data Analysis -- 4 Study Execution and Results -- 4.1 Experimental Study -- 4.2 Results -- 5 Persona-Centric Discussion -- 5.1 Persona 1: Martha -- 5.2 Persona 2: Matthew -- 6 Conclusion -- References -- Towards a Methodology for Developing Human-Al Collaborative Decision Support Systems -- 1 Introduction -- 2 Requirements to Human-AI Collaborative DSSs -- 3 Foundational Problems Behind the Development of Human-Al Collaborative DSS -- 4 Methodology -- 4.1 Principles of the Methodology -- 4.2 Processes -- 5 Discussion and Conclusion -- References -- Simplifying the Development of Conversational Speech Interfaces by Non-Expert End-Users Through Dialogue Templates -- 1 Introduction -- 2 Background and Related Work -- 3 Conversational Speech Interfaces in Industrial Environments -- 4 Proposed Approach -- 4.1 Adilib: Our Conversational Assistant Development Platform -- 4.2 Adilib Dialogue Templates -- 4.3 Orchestrator -- 5 Evaluation -- 5.1 Navigation Use Case -- 5.2 Questionnaire Use Case -- 5.3 Slot Filling Use Case -- 6 Conclusions and Future Work -- References -- Multiparty Dialogic Processes of Goal and Strategy Formation in Hybrid Teams -- 1 Introduction -- 2 Related Concepts -- 3 Problem Space -- 4 Cognitive System Support -- 4.1 Centralized Setting -- 4.2 Multiparty Setting -- 4.3 Peer Level -- 4.4 Suitable Support for Strategy Finding -- 5 Research Questions and Corresponding Work -- 6 Innovation and Effect, Conclusions --References -- Adaptive Network Modelling of Informal Learning Within an Organization by Asking for Help and Getting Help -- 1 Introduction -- 2 Background Knowledge -- 3 Scenario -- 4 Self-modeling Network Modelling Approach -- 5 The Adaptive Network Model -- 6 Simulation Results -- 6.1 Scenario 1: Anna Asks Ben. 6.2 Scenario 2: Anna Asks Both Ben and Carlos -- 6.3 Scenario 3a: Anna Asks Ben, Ben Asks Carlos, and Carlos Gives the Answer to Anna -- 6.4 Scenario 3b: Anna Asks Ben, Ben Asks Carlos, and Carlos Tells Ben, so Ben Can Tell Anna -- 7 Discussion -- 8 Limitations and Further Research -- Appendix -- Scenario 1 -- Scenario 2 -- Scenario 3a --Scenario 3b -- References -- Trust, Perspicuity, Efficiency: Important UX Aspects to Consider for the Successful Adoption of Collaboration Tools in Organisations -- 1 Introduction -- 2 Related Work -- 3 Method -- 4 Results -- 4.1 Participants -- 4.2 Use of Collaboration Tools -- 4.3 Importance Ratings -- 5 Discussion -- 5.1 RQ1: How Are Collaboration Tools Used? -- 5.2 RQ2: Which UX Aspects Do Users Find Important for Collaboration Tools? -- 5.3 On the Importance Ranking of Aspects -- 5.4 On the Stability of the Importance Rankings -- 6 Conclusion -- References -- Tracing Stress and Arousal in Virtual Reality Games Using Players' Motor and Vocal Behaviour -- 1 Introduction -- 2 State-of-the-Art -- 3 Rationales -- 4 Video Game Description -- 4.1 Game Level -- 4.2 Vocal Interaction Layer -- 4.3 Devices Used to Collect Data -- 5 Experimental Setting -- 5.1 Demographic Data of the Sample -- 5.2 Self-annotation -- 6 Methods:

1 Introduction -- 2 Related Work -- 2.1 Brain Computer Interface for

Model-Based Analysis -- 6.1 Stress Estimation -- 6.2 Arousal Estimation -- 6.3 Data Pre-processing -- 7 Results -- 7.1 Discussion -- 8 Conclusions -- 8.1 Final Conclusions and Further Work --References -- Electro-oculographic Discrimination of Gazing Motion to a Smartphone Notification Tone -- 1 Introduction -- 2 Related Work -- 3 Experiment: Physiological Signals in Response to Notification Tone -- 3.1 Task, Procedure and Participant -- 3.2 Physiological Signals --3.3 Result of Electro-oculogram -- 3.4 Logistic Regression Analysis to Discriminate Gazing Using iEMG. 3.5 Result of Skin Conductance Response -- 3.6 Discussion -- 4 Conclusions -- References -- Why Career Orientation is Often Difficult and How Digital Platforms Can Support Young People in This Process --1 Introduction -- 2 Career Orientation -- 3 Presentation of a Career Orientation Platform for Young People -- 4 Method -- 5 Results -- 5.1 Career Choice Competence -- 5.2 Difficulties in Choosing a Profession -- 5.3 Better Support for Career Guidance -- 5.4 Preferred Functional. Design and Gamification Elements -- 5.5 What Goals Should Career Guidance Websites Achieve? -- 5.6 Motivational Regulation of School Students and University Students -- 6 Discussion, Implications and Limitations -- 7 Conclusion -- References -- 3D Reconstruction Using a Mirror-Mounted Drone: Development and Evaluation of Actual Equipment -- 1 Introduction -- 2 Related Works -- 2.1 Imaging and 3D Reconstruction with Drones -- 2.2 3D Reconstruction with Mirrors -- 3 Design and Fabrication of the Mirror-Mounted Drone -- 3.1 Drone Types -- 3.2 Design of the Mirror -- 3.3 Fabrication of the Mirror-Mounted Drone -- 4 Imaging and 3D Reconstruction Using the Mirror-Mounted Drone -- 4.1 Estimation of the Mirror Pose -- 4.2 3D Reconstruction Considering the Mirror Reflection -- 5 Evaluation of the Proposed Method -- 5.1 Outline of the Evaluation -- 5.2 Method -- 5.3 Results -- 6 Conclusion and Future Work -- References -- Do Users Tolerate Errors? Effects of Observed Failures on the Subjective Evaluation of a Gesture-Based Virtual Reality Application -- 1 Introduction -- 2 Theory -- 3 Methods -- 3.1 Design -- 3.2 Participants -- 3.3 Facilities and Apparatus -- 3.4 Interaction Tasks --3.5 Procedure -- 3.6 Dependent Variables -- 4 Results -- 5 Discussion -- References -- A Bi-national Investigation of the Needs of Visually Disabled People from Mexico and Japan -- 1 Introduction. 2 Related Work -- 3 Methodology -- 4 Participants -- 4.1 Data Collection -- 5 Results -- 5.1 Thematic Analysis -- 6 Discussion -- 7 Future Work -- 8 Conclusions -- References -- A Three Level Design Study Approach to Develop a Student-Centered Learner Dashboard --1 Introduction -- 1.1 Background -- 1.2 Using Design Studies and UCD in the Development of LADs/LDs -- 1.3 Focus on an Iterative Approach Within the UCD Process -- 2 Methodological Approach -- 2.1 User-Centered Design -- 2.2 Key Design Study Issues to Consider -- 2.3 The Three-Level Evaluation Approach -- 3 Development and Implementation of the Learner Dashboard Based on the Three-Level Design Study -- 3.1 The Development of a Wireframe for a Learner Dashboard -- 3.2 Evaluation Based on Gestalt Laws and Fact and Interaction Problems (Level 1) -- 3.3 Evaluation Based on the Seven Interaction Principles (Level 2) -- 3.4 Performing the Eye-Tracking Procedure with Thinking Aloud (Level 3) -- 4 Summary and Discussion -- 5 Outlook -- References -- Why are You Blinking at Me? Exploring Users' Understanding of Robotic Status Indicators -- 1 Introduction -- 2 Aim and Scope -- 3 Study Design -- 3.1 Step 1: Explore -- 3.2 Step 2: Analyze -- 3.3 Step 3: Evaluate -- 4 Evaluation Results -- 4.1 Part I - Fit Animation to a Given Status -- 4.2 Part II -Rank Agreement with Manufacturer Intentions -- 4.3 Part III - Fit

a Status to a Given Animation -- 5 Discussion -- References -- Immediate-After Effect of Enhancement Push-Off at a Terminal Stance Phase of Gait Using Heating of Insole Tip for the Development of Smart Insole -- 1 Introduction -- 2 Methods -- 2.1 Participants -- 2.2 Gait Task -- 2.3 Motion Analysis -- 2.4 Statistical Analysis -- 3 Results -- 4 Discussion -- 5 Conclusion -- References -- An Intuitive Interface for Technical Documentation Based on Semantic Knowledge Graphs. 1 Challenges in Technical Documentation.

Sommario/riassunto

These 2 volumes constitute the selected papers of the 7th International Conference, CHIRA 2023, held Rome, Italy, during November 16–17, 2023. The 14 full papers and the 29 short papers presented in these books were carefully reviewed and selected from 69 submissions. The papers selected contribute to the advancement of research and practical applications of human-technology and human-computer interaction. Different aspects of Computer-Human Interaction were covered in four parallel tracks: human factors for interactive systems, research, and applications; interactive devices; interaction design; and adaptive and intelligent systems.