| Record Nr.              | UNISA996465550003316   |
|-------------------------|--|
| Titolo                  | Virtual and Mixed Reality - Systems and Applications [[electronic<br>resource] ] : International Conference, Virtual and Mixed Reality 2011,<br>Held as Part of HCI International 2011, Orlando, FL, USA, July 9-14,<br>2011, Proceedings, Part II / / edited by Randall Shumaker  |
| Pubbl/distr/stampa      | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer,<br>, 2011  |
| ISBN                    | 3-642-22024-X  |
| Edizione                | [1st ed. 2011.]  |
| Descrizione fisica      | 1 online resource (XXVII, 436 p. 203 illus., 160 illus. in color.)   |
| Collana                 | Information Systems and Applications, incl. Internet/Web, and HCI ; ; 6774   |
| Disciplina              | 005.437  |
| Soggetti                | User interfaces (Computer systems)<br>Computer graphics<br>Artificial intelligence<br>Special purpose computers<br>Application software<br>Multimedia information systems<br>User Interfaces and Human Computer Interaction<br>Computer Graphics<br>Artificial Intelligence<br>Special Purpose and Application-Based Systems<br>Information Systems Applications (incl. Internet)<br>Multimedia Information Systems  |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Bibliographic Level Mode of Issuance: Monograph  |
| Nota di contenuto       | Intro Title Page Foreword Organization Table of Contents<br>Part I: VR in Education, Training and Health Serious Games for<br>Psychological Health Education Research Overview Pedagogical<br>Foundations for Military Psychological Health Education Prevention<br>as a Pedagogical Construct Virtual Learning Environments and<br>Serious Games for as Psychological Health Education Tools Virtual<br>Reality Exposure Training (VRET) Second Life as a Healing Space for<br>Veterans "Walk in My Shoes" - A Serious Game for Psychological |

1.

Health -- Games for Psychological Health: Key Design Recommendations -- Conclusions -- References -- Mixed Reality as a Means to Strengthen Post-stroke Rehabilitation -- Introduction --Describing Stroke -- Motivations: Advantages of 'Virtual Rehabilitation' -- The Mixed Reality System -- Therapists Opinion and Virtual Rehabilitation Systems -- The Experiment Protocol -- Results and Discussion -- Conclusion and Future Works -- References -- A Virtual Experiment Platform for Mechanism Motion Cognitive Learning --Introduction -- General Idea and System Structure for Virtual Experiment Platform -- Method and Technology -- Component Modeling and Information Mapping -- Virtual Experiment Scene Assembling and Calculation -- Visualization of Calculation Results --Development and Application of the Virtual Experiment Platform for Mechanism Motion Cognitive Learning -- Development of the Virtual Experiment Platform for Mechanism Motion -- Assembly and Simulation of Simple Punching Machine Experiment -- Discussion --Conclusion -- References -- Mechatronic Prototype for Rigid Endoscopy Simulation -- Introduction -- Mechatronic System -- Rigid Endoscope Model -- Position and Orientation of the Tracking System --Collision Detection and Force Feedback -- Electronic System --Computer Prototype -- Test and Results. Conclusions and Future Work -- References -- Patterns of Gaming Preferences and Serious Game Effectiveness -- Introduction --Technology Acceptance Model and Gender -- Applying the TAM to

Serious Games -- Gender Differences in Game Playing Preferences and Behaviors -- Neurocognitive Basis for Preferences and Behaviors --Psychosocial Basis for Preferences and Behaviors -- Present Study: Gender and Game Preferences -- Implications and Future Directions for Serious Games Designers and Researchers -- Designing Serious Games for Both Genders -- References -- Serious Games for the Therapy of the Posttraumatic Stress Disorder of Children and Adolescents --Introduction -- Related Work -- Game Concept and Principles -- Game Design and Key Principles -- Effective Hierarchy -- User Tests -- Test Setup -- Results and Discussion -- Conclusion and Outlook --References -- Virtual Reality as Knowledge Enhancement Tool for Musculoskeletal Pathology -- Introduction -- Contemporary Training Issues -- Visualisation Methods -- VR Interface -- Context Development -- Evaluation -- Conclusions -- References -- Study of Optimal Behavior in Complex Virtual Training Systems -- Introduction -- Manipulability Solid -- Useful Manipulability -- A New Algorithm for Optimal Positioning -- Interference Factor-IF -- Results -- Different Virtual Scenarios -- References -- Farming Education: A Case for Social Games in Learning -- Introduction -- Pervasiveness of Social Networks -- Pervasiveness of Social Games -- Popular Types of Social Games --Energy Depletion Games -- Appointment Games -- Social Competition Games -- Linked to Friends -- Current Educational Examples --Hidden Agenda -- EnerCities -- Farmville for Math Education --Untapped Opportunities for Learning -- Motivation -- Connected Learning -- Inter-reliant Learning -- Reflection -- Conclusions --References.

Sample Size Estimation for Statistical Comparative Test of Training by Using Augmented Reality via Theoretical Formula and OCC Graphs: Aeronautical Case of a Component Assemblage -- Introduction -- We Propose to Use via Theoretical Formula and OCC Graphs -- Paper Preparation -- Data Analysis and Filtering -- Formulas -- Kolmogorov-Smirnov Test -- Confidence Interval -- Via Theoretical Formula and OCC Graphs -- Scenarios Developed by Formula -- Scenarios Developed by OCC Charts -- Results -- Conclusion -- References --

Enhancing English Learning Website Content and User Interface Functions Using Integrated Quality Assessment -- Introduction --Methodology -- Population and Sample -- Weekly Use of the Website -- Instrumentation -- Data Collection -- Data Analysis -- Findings --English Learning Website -- Quality Attributes of Website Content in Kano Model -- Quality Attributes of Interface Functions -- Importance Level and Satisfaction Level of the Interface Functions -- Discussion --Conclusions -- References -- The Influence of Virtual World Interactions toward Driving Real World Behaviors -- Introduction --Literature Review -- Virtual World Demonstration Framework -- User Centered Design -- Description of Framework Components -- Tour Stop 1: Energy Dashboard -- Tour Stop 2: Motion-Detected Low Voltage LED Lighting -- Tour Stop 3: HVAC Day/Night Modes -- Tour Stop 4: Wind Turbine and Solar Panel -- Method -- Results --References -- Interactive Performance: Dramatic Improvisation in a Mixed Reality Environment for Learning -- Introduction -- Interactive Performance -- The Latina Empowerment Project -- Story Development and Training -- The Development Process -- Field Work -- Live Storyboarding -- Physical Setup -- Trial Runs -- Transition from Live Storyboarding to 3d Avatar System -- A Novel Control Mechanism --Scenario-Specific Gestures.

Designing the 3d Characters -- Test Configuration -- A Feedback System -- Interactive Performance Issues -- Experiments to Be Conducted -- References -- Emotions and Telerebabilitation: Pilot Clinical Trials for Virtual Telerebabilitation Application Using Haptic Device and Its Impact on Post Stroke Patients' Mood and Motivation --Introduction/Background -- Materials and Methods -- Experimental Protocol -- System Description -- Measures -- Results -- Discussion -- Conclusions -- References -- An Interactive Multimedia System for Parkinson's Patient Rehabilitation -- Introduction -- Background --User Needs and Strategies -- Physical Therapist Needs -- Patient Needs -- System Design -- System Structure -- Data Capture -- Sensory Cueing -- Sensory Feedback -- Conclusion -- References -- Part II: VR for Culture and Entertainment -- VClav 2.0 - System for Playing 3D Virtual Copy of a Historical Clavichord -- Introduction -- From VClav to VClav 2.0 -- Virtual Reality Hardware and Software -- 5DT Data Glove Ultra 14 -- Polhemus Patriot Tracker -- The Display -- NeoAxis Engine -- System for Playing a 3D Virtual Copy of a Historical Clavichord --Modifying the 3ds Max Models to the NeoAxis Engine Format --Definition of Physical Mechanisms of the Clavichord and a Hand --Implementation of the Mechanism Controlling the Glove and the Tracker -- VClav2.0 in Use -- Conclusions -- References -- A System for Creating the Content for a Multi-sensory Theater -- Introduction --Related Research -- Multi-sensory Theater and Content Editing System -- Devices and Theater Environment -- Content Editing Framework --Editing Process -- Conclusion -- References -- Wearable Display System for Handing Down Intangible Cultural Heritage -- Introduction -- Kamisuki, Japanese Traditional Paper-Making -- Methodology --Measuring Kamisuki Skills -- Wearable Display System. Experiment of Handing Down Kamisuki Skill -- Conclusion --References -- Stroke-Based Semi-automatic Region of Interest Detection Algorithm for In-Situ Painting Recognition -- Introduction --Overview of the Proposed Algorithm -- Proposed ROI Detection Algorithm for Robust Recognition -- A Stroke-Based Semi-automatic ROI Detection with Vertex Estimation -- In-Situ Painting Recognition Based on Local Binary Pattern -- Implementation and Experimental Results -- Implementation -- Experimental Results -- Conclusions and Future Works -- References -- Personalized Voice Assignment

|                    | Techniques for Synchronized Scenario Speech Output in Entertainment<br>Systems Introduction Quick Post-recording Tool Designing the<br>Timing Information of Post-recordings Automatic Post-processing<br>Prototype of Post-recording Tool Evaluation of Post-recording<br>Tool Selecting Similar Speakers Estimation Method<br>Optimization of Weighting Coefficients Voice Morphing Two<br>Speakers' Voice Morphing Multiple Speakers' Voice Morphing<br>Voice Morphing for Generating Specific Speakers Implementation of<br>Synchronized Speech Output Discussion and Conclusion<br>References Instant Movie Casting with Personality: Dive into the<br>Movie System Introduction Related Works Summary of FCS<br>Up-to-Date DIM Movie Conclusions References A Realtime and<br>Direct-Touch Interaction System for the 3D Cultural Artifact Exhibition<br>Introduction Related Work Multisensory System of the Cultural<br>Heritage Direct-Touchable Multisensory System Direct-Touchable<br>Multisensory Exhibition System Direct-Touch Interaction for the<br>Stereoscopic Vision Digital Archive Graphic Modeling Haptic<br>Modeling Results Conclusion and Future Work References.<br>Digital Display Case: A Study on the Realization of a Virtual<br>Transportation System for a Museum Collection. |
|--------------------|--|
| Sommario/riassunto | The two-volume set LNCS 6773-6774 constitutes the refereed<br>proceedings of the International Conference on Virtual and Mixed<br>Reality 2011, held as Part of HCI International 2011, in Orlando, FL,<br>USA, in July 2011, jointly with 10 other conferences addressing the<br>latest research and development efforts and highlighting the human<br>aspects of design and use of computing systems. The 47 revised<br>papers included in the first volume were carefully reviewed and<br>selected from numerous submissions. The papers are organized in the<br>following topical sections: VR in education, training and health; VR for<br>culture and entertainment; virtual humans and avatars; developing<br>virtual and mixed environments.   |