

Table of Contents

Interactions in Games

Gamers against All Odds	1
<i>Anna-Sofia Alklind Taylor, Per Backlund, Henrik Engström, Mikael Johannesson, and Mikael Lebram</i>	
Matchmaker: Interpersonal Touch in Gaming	13
<i>Cody Watts, Ehud Sharlin, and Peter Woytiuk</i>	
Doing It Right: Combining Edutainment Format Development and Research	25
<i>Simon Staffans, Annika Wiklund-Engblom, Marc Hassenzahl, and Susanne Sperring</i>	

Simulation and Animation

Virtual Apple Tree Pruning in Horticultural Education	26
<i>Ning Xia, Ai-Shuang Li, and Dan-Feng Huang</i>	
An Architecture for Flexible Entity Configuration in a Simulation Environment	38
<i>Changgu Kang, Yoosoo Oh, and Woontack Woo</i>	
A Distributed Multi-agent Architecture in Simulation Based Medical Training	49
<i>Jun Hu and Loe Feijs</i>	

Digital Museum and Digital Heritage

A Review on Augmented Reality for Virtual Heritage System	50
<i>Zakiah Noh, Mohd Shahrizal Sunar, and Zhigeng Pan</i>	
Mixing Telerobotics and Virtual Reality for Improving Immersion in Artwork Perception	62
<i>Luca Brayda, Nicolas Mollet, and Ryad Chellali</i>	
Developing a Film-Based Learning System with English Verbal Reduced Forms for Supporting English Listening Comprehension	74
<i>Jie-Chi Yang, Yi-Lung Lin, and Ching-I. Chung</i>	
An Interactive 3D Exhibition System with Global Illumination for Digital Museum	85
<i>Gang Bai and Yue Qi</i>	

Lishe System	93
<i>Zongquan Ma, Yue Qi, and Ling Zhao</i>	
E-Learning: The Strategies of Learning Culture and Arts	101
<i>Chen-Wo Kuo, Jiann-Min Yang, Quo-Ping Lin, and Maiga Chang</i>	
SoundTag: RFID Based Wearable Computer Play Tool for Children	108
<i>Ryoko Ueoka, Hiroki Kobayashi, and Michitake Hirose</i>	
Sketch Learning Environment with Diagnosis and Drawing Guidance from Rough Form to Detailed Contour Form	109
<i>Masato Soga, Shota Kuriyama, and Hirokazu Taki</i>	

Game Design and Development

Construction of a Computer Game Oriented to Disaster Education and Reflections on Its Problems	110
<i>Sujing Zhang and Hanjie Gu</i>	
CharanisML: A Flexible Virtual Actor Control Interface	120
<i>Sebastian A. Weiß, Florian Berger, Alexander Marbach, and Wolfgang Müller</i>	
Game Balance Principles in MMORPG with Pet System	133
<i>Linlin Shui, Guangzheng Fei, Guoyu Sun, and Chi Wa Leong</i>	
An Approach to Evaluation Component Design in Building Serious Game	141
<i>Sanya Liu and Wan Ding</i>	
Do Improve Typing Skill but No Significant Difference between Drill-Based and Game-Based Typing Software	149
<i>Chun-Hung Lin and Eric Zhi-Feng Liu</i>	
Little Big Difference: Gender Aspects and Gender-Based Adaptation in Educational Games	150
<i>Christina M. Steiner, Michael D. Kickmeier-Rust, and Dietrich Albert</i>	
Game-Like Simulations for Online Adaptive Learning: A Case Study . . .	162
<i>Javier Torrente, Pablo Moreno-Ger, Baltasar Fernández-Manjón, and Ángel del Blanco</i>	
Motivational Factors in Educational MMORPGs: Some Implications for Education	174
<i>Kuo-Hsun Hung, Charles Kinzer, and Cheng-Ling Alice Chen</i>	
Designing a Trading Card Game as Educational Reward System to Improve Students' Learning Motivations	175
<i>Peayton Chen, Rita Kuo, Maiga Chang, and Jia-Sheng Heh</i>	

Where Academics Meet the Real World: Difficulties Encountered When Conducting a Project for Designing a Game-Based Learning in a Company	176
<i>Eduardo Werneck and Maiga Chang</i>	

Social and Cultural Issues

An Entertainment System Using Thermal Feedback for Increasing Communication and Social Skills.....	184
<i>Takuji Narumi, Tomohiro Akagawa, Young Ah Seong, and Michitaka Hirose</i>	
Student Attitudes towards Using Culturally-Oriented Educational Games to Improve Programming Proficiency: An Exploratory Study....	196
<i>Phaedra Mohammed and Permanand Mohan</i>	
Towards Intelligent Computer Assisted Educational Role-Play	208
<i>Mei Yui Lim, Ruth Aylett, Sibylle Enz, Michael Kriegel, Natalie Vannini, Lynne Hall, and Susan Jones</i>	
Reflective Learning through Playing Digital Game the Sims 2.....	220
<i>Hui-Chun Hsiao</i>	

Storytelling and Narrative in Education

A Story Authoring System for Children.....	228
<i>Danli Wang, Tingting Yin, Fang Peng, Jinqian Xiong, Hongan Wang, and Guozhong Dai</i>	
Simplified Creation and Presentation of Non-linear Adaptive Content...	239
<i>Oliver Schneider, Udo Bleimann, Andrew D. Phippen, and Bettina Harriehausen-Mühlbauer</i>	
Exploration of Affect Sensing from Speech and Metaphorical Text.....	251
<i>Li Zhang</i>	

Game-Based Learning/Training

QuizMAster - A Multi-Agent Game-Style Learning Activity	263
<i>Mark Dutchuk, Khalid Aziz Muhammadi, and Fuhua Lin</i>	
The Effects of Type of Interactivity in Experiential Game-Based Learning	273
<i>Ming-Puu Chen and Li-Chun Wang</i>	
Virtual Sport System for Optimum Exercising Based on a User Model	283
<i>Kazumoto Tanaka, Takayuki Kataoka, and Makoto Hasegawa</i>	

Engaging Kids with the Concept of Sustainability Using a Commercial Videogame-A Case Study	291
<i>Panagiotis Tragazikis and Michael Meimaris</i>	
Entertaining Education - Using Games-Based and Service-Oriented Learning to Improve STEM Education.....	292
<i>Jon Preston and Briana Morrison</i>	
Learning English through Serious Games - Reflections on Teacher and Learner Performance	293
<i>Bente Meyer</i>	

VR-Based Education/Training

ELEIN: E-Learning with 3D Interactive Emotional Agents	294
<i>Amalia Ortiz, David Oyarzun, and María del Puy Carretero</i>	
Tangible Drag-and-Drop: Transferring Digital Content with a Remote Control	306
<i>Mathieu Hopmann, Daniel Thalmann, and Frédéric Vexo</i>	
Adaptation in Collaborative Virtual Environments for Training	316
<i>Stéphanie Gerbaud, Valérie Gouranton, and Bruno Arnaldi</i>	
Pushdown Automata Simulator	328
<i>Mohamed Hamada</i>	
Construction Knowledge Transfer through Interactive Visualization	339
<i>Paul Woodard, Shafee Ahamed, Roberto Canas, and John Dickinson</i>	
Pathfinding Strategy for Multiple Non-Playing Characters in 2.5 D Game Worlds.....	351
<i>Jason MacGregor and Steve Leung</i>	
Research on Using Cult3D and Java to Realize Virtual Assembly	363
<i>Ruwei Yun, Baoyun Zhang, and Zhigeng Pan</i>	
Design and Implementation of Operation Replay for Virtual Experiment	371
<i>Jiufei Tang, Xingming Ouyang, Junqing Yu, and Liefu Ai</i>	

Vision and Imaging Technology in Games

Adaptive Lip Feature Point Detection Algorithm for Real-Time Computer Vision-Based Smile Training System	379
<i>Youngkyoon Jang and Woontack Woo</i>	
Fast Shape-Simplifying Image Abstraction Using Graphics Hardware ...	390
<i>Hanli Zhao, Xiaogang Jin, Jianbing Shen, Li Shen, and Ruifang Pan</i>	

Educational Robot and Toy

Music-Making and Musical Comprehension with Robotic Building Blocks	399
<i>Niels Kristian Barendsen, Carsten Jessen, and Jacob Nielsen</i>	
AdMoVeo: A Robotic Platform for Teaching Creative Programming to Designers	410
<i>Sjriek Alers and Jun Hu</i>	
Edutainment Robotics as Learning Tool	422
<i>Eleonora Bilotta, Lorella Gabriele, Rocco Servidio, and Assunta Tavernise</i>	

Augmented Reality in Education/Training

Designing a DSL Solution for the Domain of Augmented Reality Software Applications Specification.....	423
<i>André Rosa, Vasco Amaral, and Bruno Barroca</i>	
A Study of Virtual Product Presentation with Whiteboard and Its Effect on Users Perception	435
<i>Wu-Yuin Hwang, Siao-Han Syu, Jung-Lung Hsu, and Chio-Tan Kuo</i>	
Survey on Collaborative AR for Multi-user in Urban Studies and Planning	444
<i>Ajune Wanis Ismail and Mohd Shahrizal Sunar</i>	

Enriching Users' Edutainment through Embodied Video Interactive Games

The Learning Effectiveness of Blended and Embodied Interactive Video Game on Kindergarten Students	456
<i>Chih-Min Tsai, Jon-Chao Hong, and Ya-Jiuan Ho</i>	
From Fingers to Embodiment: A Study on the Relations of the Usability, Dependability of the Embodied Interactive Video Games and the Elders' Flow Experience	464
<i>Ming-Yueh Hwang, Jon-Chao Hong, Jyh-Tsorng Jong, Chia-Kun Lee, and Hsing-Yun Chang</i>	
Kindergartners' Color Preference and Temperament in Embodied Interactive Video Game	473
<i>Jyh-Tsorng Jong, Yin-Wen Lee, Jon-Chao Hong, Ming-Yueh Hwang, and Yung-Wei Hao</i>	

Researches on Educational Robots of Taiwan e-Learning and Digital Archives Program

Researches on Using Robots in Education	479
<i>Liang-Yi Li, Chih-Wei Chang, and Gwo-Dong Chen</i>	
A Task-Based Role-Playing Game with Educational Robots for Learning Language	483
<i>Gwo-Dong Chen and Chih-Wei Chang</i>	
Design of an Interactive Table for Mixed-Reality Learning Environments	489
<i>Mu-Chun Su, Gwo-Dong Chen, Yi-Shan Tsai, Ren-Hao Yao, Chung-Kuang Chou, Yohannes Budiono Jinawi, De-Yuan Huang, Yi-Zeng Hsieh, and Shih-Chieh Lin</i>	
A Study of Collaboration and Conflicts Using Multi-robots	495
<i>Wu-Yuin Hwang, Sheng-Yi Wu, Chien-Ming Chen, and Yung-Hsun Hsieh</i>	
A Case Analysis of Creative Spiral Instruction Model and Students' Creative Problem Solving Performance in a LEGO® Robotics Course	501
<i>Chun-Hung Lin, Eric Zhi-Feng Liu, Chan-Hsin Kou, Marjo Virnes, Erkki Sutinen, and Shan-Shan Cheng</i>	
Gender Heterogeneous Groups in Cooperative Learning Applied in "Robots in Creative Course": A Pilot Study	506
<i>Chen-Yi Wang, Tzu-Chien Liu, and Yi-Chun Lin</i>	
Exploring Children's Perceptions of the Robots	512
<i>Yi-Chun Lin, Tzu-Chien Liu, Maiga Chang, and Shiau-Ping Yeh</i>	
Development of an Emotional Robot as a Teaching Assistant	518
<i>Jwu-E Chen, Lu-Tsou Yeh, Hua-Hsiang Tseng, G-W Wu, and In-Hang Chung</i>	

Researches on Innovative Design of Learning Software and Content

Empirical Research and Design of M-Learning System for College English	524
<i>Wei Wang, Shaochun Zhong, Zhuo Zhang, Senlin Lv, and Lina Wang</i>	
Designing an e-Learning Reactivate Promotion for Unpopular Collections in Academic Library	536
<i>Bo-Yen Wang, Yuan-Hsun Liao, Chia-Ming Liu, Ming-Hsiang Su, and Pao-Ta Yu</i>	

Multi-media e-Learning Platform Using Green Design with Near-Real Approach	544
<i>Yuan-Hsun Liao, Chia-Ming Liu, Bo-Yen Wang, Ming-Hsiang Su, Xiaso-Hui Lee, and Pao-Ta Yu</i>	
Interactive Whiteboard Teaching in English Education Based on Dual Code Theory and Bloom Teaching Quality	551
<i>Chia-Ming Liu, Bo-Yen Wang, Yuan-Hsun Liao, Ming-Hsiang Su, and Pao-Ta Yu</i>	
A Cognitive-Interactive Approach to Chinese Characters Learning: System Design and Development	559
<i>Yu-Ju Lan, Yao-Ting Sung, Chia-Yu Wu, Rui-Lin Wang, and Kuo-En Chang</i>	
An Automatic Course Generation System for Organizing Existent Learning Objects Using Particle Swarm Optimization.....	565
<i>Yen-Ting Lin, Shu-Chen Cheng, Jin-Tan Yang, and Yueh-Min Huang</i>	
The Experience of Adopting Game-Based Learning in Library Instruction	571
<i>Sheng-Hui Hsu, Shu-Chen Cheng, and Yueh-Min Huang</i>	
Author Index	577