

# Contents

## International Workshop on Web Intelligence and Learning

A Web-Based Virtual Lab Platform for Algorithm Learning . . . . .	3
<i>Yu Sheng, Wei Zhou, and Jianxin Wang</i>	
A Genetic Algorithm-Based Multiple Characteristics Grouping Strategy for Collaborative Learning . . . . .	11
<i>Hui-Wen Tien, Yu-Shih Lin, Yi-Chun Chang, and Chih-Ping Chu</i>	
Adaptation Based on Navigation Type and Learning Style . . . . .	23
<i>Nabila Bousbia, Amina Gheffar, and Amar Balla</i>	
A Novel Recommendation Relevancy Measure for Collaborative Filtering . . .	32
<i>Bo Shu, Zhendong Niu, Chunxia Zhang, Xiaotian Jiang, Hongping Fu, and Wei Chen</i>	
Automatic Clustering of Research Articles Using Domain Ontology and Fuzzy Logic . . . . .	42
<i>Ramanathan Periakaruppan and Rethinaswamy Nadarajan</i>	
Model of Teachers' Personalized Decision Making on Activities and Resources in Web-Based Training . . . . .	52
<i>Kai-li Wang and Wen-ya Liu</i>	

## International Symposium on Knowledge Management and E-Learning

Analyzing Learning Flows in Digital Learning Ecosystems . . . . .	63
<i>Maka Eradze, Kai Pata, and Mart Laanpere</i>	
Research Trends of Language Learning in Virtual Reality from 2003 to 2012: A Content Analysis . . . . .	73
<i>Tsun-Ju Lin, Yu-Ju Lan, and Yu-Hsuan Kan</i>	

## International Workshop on Ubiquitous Social Learning

An Interactive 3D Social Graphs for Social Learning . . . . .	85
<i>Noorkholis Luthfil Hakim, Shun-Kai Wang, Timothy K. Shih, Wu-Yuin Hwang, Yu-Ren Chen, and Ankhtuya Ochirbat</i>	
Improving KeyNote Trust Management Model Based on User Behavior for Social Learning . . . . .	96
<i>Rui Xu, Guangquan Xu, Dazhi Sun, Xiaohong Li, and Zhiyong Feng</i>	

**International Workshop on E-Book and Education Cloud**

Enhancing Teamwork Performance in Mobile Cloud-Based Learning . . . . .	107
<i>Geng Sun and Jun Shen</i>	
An E-Book Based Competitive Learning System for Conducting Mobile Plants Learning Activities to Improving Student Learning Outcome. . . . .	118
<i>Hsueh-Liang Lin, Chen-Chien Fang, Yen-Ning Su, Chia-Cheng Hsu, Ming-Yi Shih, and Yueh-Min Huang</i>	
The E-Book Learning System with Problem-Based Learning in a Public Health Nursing Practice Course. . . . .	128
<i>Shu-Hsien Huang, Ting-Ting Wu, and Yueh-Min Huang</i>	
Increasing Students' Vocabulary Size Through the Use of Latent Semantic Analysis in a Mobile Learning Environment. . . . .	136
<i>Yu-Fang Chiou, Bor-Chen Kuo, and Chen-Huei Liao</i>	
Analyzing Immersion in Digital Game-Based E-Book Learning Through Learners' Facial Expressions. . . . .	145
<i>Hong-Ren Chen, Qing-Fu Chen, and Yeng-Lin Lu</i>	

**International Workshop on Cloud Computing for Web-Based Learning**

The Learning Effect of Students' Cognitive Styles in Using Cloud Technology. . . . .	155
<i>Ching-Hung Yeh and Chia-Cheng Hsu</i>	
Framework of Supporting Structured Game Script Learning System . . . . .	164
<i>Feng-Jung Liu and Chun-Wei Tseng</i>	
Performance Analysis Using Petri Net Based MapReduce Model in Heterogeneous Clusters . . . . .	170
<i>Sheng-Tzong Cheng, Hsi-Chuan Wang, Yin-Jun Chen, and Chen-Fei Chen</i>	
Integration of MapReduce with an Interactive Boosting Mechanism for Image Background Subtraction in Cultural Sightseeing . . . . .	180
<i>Sheng-Tzong Cheng, Yin-Jun Chen, Yu-Ting Wang, and Chen-Fei Chen</i>	
An Weighted-Content Strategy for Integrating Heterogeneous Itembanks . . . . .	192
<i>Shih-Pang Tseng, Wen-Hsiang Fu, and Chu-Sing Yang</i>	
Teaching Effectively with the Multi-screen Multimedia Integrated System . . . . .	201
<i>Tsung-Sheng Cheng, Yu-Chun Lu, and Chu-Sing Yang</i>	

**International Workshop on Smart Living and Learning**

Preliminary Investigation of Interactive Behaviors in Distant Collaborative Exergame . . . . .	213
<i>Wu-Yuin Hwang, Kanoksa Wattanachote, Timothy K. Shih, Shih-Ching Yeh, and Shi-Yi Zhan</i>	
Second Heart Sound (S2) Decomposition by Hilbert Vibration Decomposition (HVD) for Affective Signal Modeling and Learning . . . . .	223
<i>Shovan Barma, Bo-Wei Chen, Hung-Ming Wang, Hung-Jui Wang, and Jhing-Fa Wang</i>	
Clustering XML Documents for Web Based Learning . . . . .	234
<i>Ramanathan Periakaruppan and Rethinaswamy Nadarajan</i>	
Cultural Sensitivity Training Task: An Avenue of Enhancing Students' Cultural Awareness and Its Perspectives of Web-Based Learning . . . . .	244
<i>Jaw-Shyang Wu, Tun-Whei Chuo, and Shu-Chin Yen</i>	
Web-Based-Learning via Tajen Cloud . . . . .	253
<i>Wuu-Wen Lin and Chiou-Mei Chen</i>	
Complementary to Web-Based Education on Summer Camp of Marine Energy . . . . .	259
<i>Chung-Liang Chen and Wuu-Wen Lin</i>	
Web-Based Ubiquitous Learning . . . . .	265
<i>Chiou-Mei Chen and Wuu-Wen Lin</i>	
A Virtual Reality Based Training System for Cultural Tourism . . . . .	272
<i>Shih-Pang Tseng, Mei-Wen Huang, Hsu-Jung Liu, Chao-Cheng Chung, and Chun-Mei Chiu</i>	
<b>Author Index</b> . . . . .	279