2015 IIAI 4th International Congress on Advanced Applied Informatics (IIAI-AAI 2015)

Okayama, Japan
12 – 16 July 2015

IEEE Catalog Number: CFP1562T-POD
ISBN: 978-1-4799-9959-0

Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP1562T-POD
ISBN (Print-On-Demand): 978-1-4799-9959-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

2015 IIAI 4th International Congress on Advanced Applied Informatics

IIAI-AAI 2015

Table of Contents

Message from Congress General Chair.....xvii

Message from Program Chair.....xviii

Conference Organization.....xix

Organizing Committees.....xx

Program Committee.....xxi

Keynotes.....xxiv

ESKM 2015

How to Successfully Establishing Online Stores? 3
Te-King Chien, Hon-Yu Ma, and Kai-Chi Yang

Monetary Policy Topic Extraction by Using LDA: Japanese Monetary Policy of the Second ABE Cabinet Term 8
Yukari Shirota, Yuriko Yano, Takako Hashimoto, and Tamaki Sakura

Estimation of User Location and Local Topics Based on Geo-tagged Text Data on Social Media 14
Kazunari Ishida

Programming Lecture Support System Linked to a Lecture towards Non-Kanji Countries 18
Nobuyuki Kobayashi, Kohei Sakane, Fumio Kitagawa, and Hiromitsu Shiina

Attacker Investigation System Triggered by Information Leakage 24
Yuta Ikegami and Toshihiro Yamauchi

Evidential Reasoning in Annotated Logics 28
Seiki Akama, Jair Minoro Abe, and Kazumi Nakamatsu

BPFM: A Notation and an Approach to Homogenize Variable Business Processes for Public Services 34
Riccardo Cognini, Andrea Polini, Alberto Polzonetti, and Barbara Re

Application for e-Tourism: Intelligent Mobile Tourist Guide 40
Alexander Smirnov, Alexey Kashevnik, Andrew Ponomarev, Maksim Shchekotov, and Kirill Kulakov

Towards Extracting the Hotel Evaluations from the Comments by the Foreign Tourists with Text Mining 46
Koichi Tsujii, Kazuhiko Tsuda, and Masakazu Takahashi

An Analysis of Trust Building with Awareness Information in Virtual Teams 50
Makoto Shinnishi, Kunihiko Higa, Toshifumi Kanamaru, and Shinichi Fukasawa

Visitor Behavior Analysis Based on Large-Scale Wi-Fi Location Data 55
Masaki Maruta, Yuta Sano, Kohei Yamaguchi, and Tsunenori Mine

Category Estimation of Complaint Reports about City Park 61
Yuta Sano, Kohei Yamaguchi, and Tsunenori Mine

Handling Exponential State Space in a POMDP-based Intelligent Tutoring System 67
Fangju Wang

A Dynamic Key Aggregate Cryptosystem in Cloud Environment 73
Jiann-Cherng Shieh, Cheng-Chi Lee, and Shu-Yu Lee

A Refactoring Algorithm of Workflows Based on Petri Nets 79
Ichiro Toyoshima, Shingo Yamaguchi, and Jia Zhang

A Hierarchical Visualization Program for Computer-Generated Narratives 85
Akimoto Taisuke and Ogata Takashi

A Bluetooth-Based Device-Free Motion Detector for a Remote Elder Care Support System 91
Kyohei Sugino, Shinya Katayama, Yusuke Niwa, Shun Shiramatsu, Tadachika Ozono, and Toramatsu Shintani

A Climbing Plan Sharing System with a Document Converter for Machine-Readable Climbing Plans 97
Akihiro Nohara, Shun Shiramatsu, Tadachika Ozono, and Toramatsu Shintani

Analyzing Key Process Areas in Process Improvement Model for Service Provider Organization, CMMI-SVC 103
Shigeru Kusakabe

Sentiment Polarity Analysis for Generating Search Result Snippets Based on Paragraph Vector 109
Yujiro Terazawa, Shun Shiramatsu, Tadachika Ozono, and Toramatsu Shintani

Customer Churn Prediction in Virtual Worlds 115
Hsiu-Yu Liao, Kuan-Yu Chen, Duen-Ren Liu, and Yi-Ling Chiu

Estimation of Student Performance by Considering Consecutive Lessons 121
Shaymaa E. Sorour, Kazumasa Goda, and Tsunenori Mine

Regional Information Video Searches Using Word Searches Generated by Twitter Posts 127
Masahiro Takeda, Nobuyuki Kobayashi, Fumio Kitagawa, and Hiromitsu Shiina

Unique Links as Weak Ties 132
Yasuhiro Yamada, Daisuke Ikeda, and Sachio Hirokawa

Optimizing Data Partitioning at Broadcasting the Data on Balanced N-ary Tree Formed P2P Systems 137
Takashi Yamanoue

Vector Similarity of Related Words in the Japanese Word Net 142
Takuya Hirao, Nao Wariishi, Takahiko Suzuki, and Sachio Hirokawa

The Development of Library Mobile Book-Finding System Based on NFC 148
Po-Kai Liao and Jiann-Cherng Shieh

Document Classification with Varied Viewpoints Using Matrix Decomposition 154
Kaname Maruta, Hidetoshi Nagai, and Teigo Nakamura

Evaluating Individual Artists' Use of SNS as a Method for Providing Information 160
Shinji Sato, Yukiko Watanabe, and Emi Ishita

Focused Citation Count: A Combined Measure of Relevancy and Quality 166
Tetsuya Nakatoh, Hayato Nakanishi, Kensuke Baba, and Sachio Hirokawa

Learning Curves for Automating Content Analysis: How Much Human Annotation is Needed? 171
Emi Ishita, Douglas W. Oard, Kenneth R. Fleischmann, Yoichi Tomiura, Yasuhiro Takayama, and An-Shou Cheng

An Automatic Dictionary Extraction and Annotation Method Using Simulated Annealing for Detecting Human Values 177
Yasuhiro Takayama, Yoichi Tomiura, Kenneth R. Fleischmann, An-Shou Cheng, Douglas W. Oard, and Emi Ishita

A Consideration on Learning by Rule Generation from Tables with Missing Values 183
Hiroshi Sakai and Chenxi Liu

Geometric Semantic Genetic Programming Using External Division of Parents 189
Akira Hara, Jun-Ichi Kushida, Kei Kisaka, and Tetsuyuki Takahama

A Method for Selecting Desirable Unfixed Shape Areas from Integrated Geographic Information System 195
Annisa, Md. Anisuzzaman Siddique, Asif Zaman, and Yasuhiko Morimoto

Extracting Topic-Related Photos in Density-Based Spatiotemporal Analysis System for Enhancing Situation Awareness 201
Tatsuhiro Sakai, Keiichi Tamura, and Hajime Kitakami

Sentiment Analysis of Wine Aroma 207
Nao Wariishi, Brendan Flanagan, Takahiko Suzuki, and Sachio Hirokawa

Acquisition of Multiple Tree Structured Patterns by an Evolutionary Method Using Sets of Tag Tree Patterns as Individuals 213
Shotarou Tani, Tetsuhiro Miyahara, Yusuke Suzuki, and Tomoyuki Uchida

Cooperative Discussion Support System by Visualizing Participant Contribution to Discussion 219
Yoko Nishihara and Wataru Sunayama

Improved Implementation of Method for Video-Watermark Detection Using Smart Device 225
Takaaki Yamada, Motoki Kamitani, Haruyuki Nakamura, and Tsuyoshi Ohta

Relation Analysis between Speech Balloon Shapes and their Serif Descriptions in Comic 229
Hideki Tanaka, Ryosuke Yamanishi, and Junichi Fukumoto

A Japanese-Chinese Cross-Language Entity Linking Method Based on Appropriateness of Term Description Pages 234
Xiang Song, Jialiang Zhou, Fuminori Kimura, and Akira Maeda

Segmentation and Impression Estimation of Novels for Automatic Assignment of BGM 239
Daiki Kato, Ryosuke Yamanishi, and Junichi Fukumoto

LTLE 2015

A Proposal of Statement Fill-in-Blank Problem in Java Programming Learning Assistant System 247
Nobuya Ishihara and Nobuo Funabiki

A Concept of Value Trace Problem for Java Code Reading Education 253
Khin Khin Zaw and Nobuo Funabiki

A Comparison on Mobile Learning Preferences of High School Teachers with Different Academic Backgrounds 259
Chiu-Lin Lai and Gwo-Jen Hwang

Supporting JFL Learners with User Customized Kanji Learning System Using Computer Graphics 264
Noriko Uosaki, Kotaro Matsushita, and Hideo Suzuki

Development of a Contextual Game for Improving English Vocabulary Learning Performance of Elementary School Students in Taiwan 268
Siang-Yi Wang, Gwo-Jen Hwang, and Shan-Feng Chen

A Relationship Analysis Tool among J07, JITEE and Job Type Utilizing i-Competency Dictionary 273
Tetsuro Kakeshita and Mika Ohtsuki

The Pilot Study of the Cooperative Learning Interactive Model in e-Classroom towards Students' Learning Behaviors 279
Yu-Hsien Huang, Po-Han Wu, and Gwo-Jen Hwang

Automatic Evaluation Methods of Trainee's Answers to Develop a 4R Risk Prediction Training System 283
Hirotsugu Minowa, Hiromi Fujimoto, and Koichi Takeuchi

A Study of Online Tutors' Teaching Efficacy and Effectiveness in Eastern Taiwan 287
Tai-Chien Kao, Yu-Yeh Chen, and Yi-No Kang

Games and Their Overlooked Potential: Facilitating Learning Using Entertainment Games 291
Yazan Aljilani and Rieko Kadobayashi

Improving Learning Achievements, Motivations and Flow with a Progressive Prompt-Based Mobile Gaming Approach 297
Chih-Hung Chen and Gwo-Jen Hwang

Designing an Educational Game with Customized Scaffolds for Learning Physics 303
Gloria Yi-Ming Kao, Chieh-Han Chiang, and Chuen-Tsai Sun

Superior Factors to Predict Learning Status 307
Dinh Thi Dong Phuong and Hiromitsu Shimakawa

Interface Evaluation of a Game-Based Learning System: Experts vs. Novices 313
Song-Yu Mei, Oskar Ku, and Sherry Y. Chen

An Web Quest-Based Context-Aware u-Learning System to Improve Students' Problem Solving and Communication Abilities in Astronomy Inquiry Activities 319
Shang-Juang Wu, Hui-Chun Chu, and Kai-Hsiang Yang

The Effects of the Social Media-Based Activities and Gaming-Based Learning in Construction Education 323
Yu-Chieh Wu and Jie-Chi Yang

A Preliminary Study of Using Laban Movement Analysis to Observe the Change of Teenagers' Bodily Expressions of Emotions in Game-Based Learning 329
Chang-Hsin Lin and Ju-Ling Shih

Analyzing Students' Cognitive Processing Patterns of a Socioscientific Issue Learning Activity with Online Discussion — A Preliminary Result of Lag Sequential Analysis 335
Huei-Tse Hou and Shu-Ming Wang

Adaptive Context-Awareness Model for Cultural Heritage Information Based on User Needs 339
Abdul Kadir Jailani, Shigeru Kusakabe, and Keijiro Araki

Fuzzy Inference System Based on a Model of Affective-Cognitive Criteria 343
Fitra A. Bachtiar, Gunadi H. Sulistyo, Eric W. Cooper, and Katsuari Kamei

Correlation between an Entropy Based Measure and English Language Learner Proficiency 349
Brendan Flanagan and Sachio Hirokawa

Using the Augmented Reality Technique to Develop Visualization Mindtools for Chemical Inquiry-Based Activities 354
Kai-Jen Yang, Hui-Chun Chu, and Kai-Hsiang Yang

Building a Web-Based Visualized Authoring System to Collaboratively Create Reconfigurable and Diagnostic Virtual Experiments in Natural Science 358
Jun-Ming Su and Jian-Rong Huang

Developing a Game-Based Learning System with Two-Tier Diagnostic Tool for Math Courses 363
Kai-Hsiang Yang, Bou-Chuan Lu, Hui-Chun Chu, and Jhen-Yuan Chen

Investigating the Effects of Mobile Learning with Cross-Age Peer Tutoring in English Learning 367
Kai-Hsiang Yang, Wen-Yu Lo, Shan-Shan Wu, and Wan-Ling Chang

A Study of the Reliability and Validity of Felder-Soloman Index of Learning Styles in Mandarin Version 370
Jingyun Wang and Takahiko Mendori

A Case Study of Analyzing Logs of LMS in Flipped Classroom 374
Yasuhiro Yamada and Masahito Hirakawa

Assessing the Attention Levels of Students by Using a Novel Attention Aware System Based on Brainwave Signals 379
Shin-Min Yang, Chih-Ming Chen, and Chih-Ming Yu

Effects of Different Video Lecture Types on Sustained Attention, Emotion, Cognitive Load, and Learning Performance 385
Wen-Fang Wang, Chih-Ming Chen, and Chung-Hsin Wu

Enhancement of Digital Reading Performance by Using a Novel Web-Based Collaborative Reading Annotation System with Two Quality Annotation Extraction Mechanisms 391
Yu-Chieh Lin, Chih-Ming Chen, and Po-Han Huang

The Prospect of Open Online e-Learning System Based on the Free Culture Movement - Development of YouTutors as an Auto-Assignment Generator by Utilizing Creative Commons Contents Online 397
Ai Nakajima and Yuichi Ono

A Game-Based Learning Environment Using the ARCS Model at a University Library 403
Kosuke Kaneko, Yuriko Saito, Yukari Nohara, Eriko Kudo, and Masanori Yamada

Implementation of a Security Micro-aerial Vehicle Based on HT66FU50 Microcontroller 409
Jonghann Jean and Fengli Lian

DSIR 2015

Status Quo and Issues of Open Access in Scholarly Research at Japanese Universities 413
Miho Funamori

Quality Assurance of Higher Education in Taiwan and Hong Kong: Decentralisation and Recentralisation in Education Governance 419
Sheng-Ju Chan and Ka Ho Mok

Visual Explanation of Mathematics in Latent Semantic Analysis 423
Yukari Shirota and Basabi Chakraborty

Introducing Common Systems among Japanese Universities for IR 429
Tetsuya Oishi, Masao Mori, and Eiichi Takata

Application of Fuzzy Method to Solve the Use of Electrical Energy-Saving 433
Shu-Ling Shieh, Shu-Fen Chiou, Wen-Fang Cheng, Bo-Long Lin, Jian-Yi Li, and Ying-Chang Lai

A Cloud Education Environment to Support Self-Learning at Home - Analysis of Self-Learning Styles from Log Data 437
Tomoichi Takahashi, Kensaku Asahi, Hidekazu Suzuki, Mikiko Kawasumi, and Yoshitaka Kameya

A Study of Institutional Research: The Garbage Can Model Perspective 441
Motonishi Takanobu

Examining the Result of a Survey Conducted from Five Viewpoints with Junior College Graduates 443
Toru Sugihara

Effect of Educational Program and Learning Environment in Japanese Schools of Medicine 449
Naoya Todo, Yuan Sun, and Shunya Inoue

How Should We Make Assessment of Graduate Educational Outcomes? Case Study from the Requirements of Research and Educational Funding Project in Japan 455
Michiyo Shimamura and Yasuhiro Yamanaka

A Challenging of Data Science in Association Research for Convention Management 458
Tokuro Matsuo, Toshikazu Fukushima, and Hidekazu Iwamoto

Can We Understand Researcher Grant Needs without Direct Communication? 462
Yusuke Yamamoto, Keigo Imai, and Taketo Tsugehara

Deciphering the Department-Discipline Relationships within a University through Bibliometric Analysis of Publications Aided with Multi-variate Techniques 468
Pitambar Gautam

The Interface between Data Science, Research Assessment and Science Support - Highlights from the German Perspective and Examples from Heidelberg University 472
Christoph Siart, Simon Kopp, and Jochen Apel

Assessment of Admission Methods on Academic Performance for Economics Majors: An Empirical Study in Taiwan 477
Eric S. Lin, Yu-Lung Lu, and Ming-Chia Lin

Quality Measurement beyond Bibliometry 483
Thomas Severiens

Big Data and Its Research Implications for Higher Education: Cases from UK Higher Education Institutions 487
Vincent Koon Ong

ICSCAI 2015

Non-negative Dictionary-Learning Algorithm for the Analysis Model Based on L1 Norm 495
Yujie Li, Shuxue Ding, Zhenni Li, and Wuhui Chen

Practices of Cooking-Step Scheduling Algorithm for Homemade Cooking 500
Yukiko Matsushima and Nobuo Funabiki

Musical Instrument Classification Based on Improved Matching Pursuit with Instrument-Specific Atoms 506
Fengqin Yu and Ying Chen

A Prediction System for Bike Sharing Using Artificial Immune System with Regression Trees 511
Jheng-Long Wu and Pei-Chann Chang

Evolutionary Rule Based Clustering for Making Fuzzy Object Oriented Database Models 517
Wirarama Wedashwara, Shingo Mabu, Masanao Obayashi, and Takashi Kuremoto

Area Partitioning Method with Learning of Dirty Areas and Obstacles in Environments for Cooperative Sweeping Robots 523
Sea Vourchteang and Toshiharu Sugawara

Karada OK: Matching Body Gestures while Musics Play 530
Sheng-Luen Chung, Yun Han, Yu-Zhan Dai, and Po-Chun Huang

Multi-dimensional Classification Automation with Human Interface Based on Metromaps 534
Marat Zhanikeev

Budget-Limited Multi-armed Bandit Problem with Dynamic Rewards and Proposed Algorithms 540
Makoto Niimi and Takayuki Ito

Intelligent Power Resource Allocation by Context-Based Usage Mining 546
Yu-Shan Liao, Hsiu-Yu Liao, Duen-Ren Liu, Wen-Ting Fan, and Hani Omar

Mining Temporal Information to Improve Duplication Detection on Bug Reports 551
Chao-Yuan Lee, Dan-Dan Hu, Zhong-Yi Feng, and Cheng-Zen Yang

Multi-strategy Genetic Algorithm for Self-Configuring Solving of Complex Optimization Problems 556
Evgenii Sopov

A Dependency-Based Automated Negotiation Mechanism for a Hypergraph Utility Model 562
Akiyuki Mori, Shota Morii, and Takayuki Ito

A Support Set Selection Algorithm for Sparse Gaussian Process Regression 568
Xinlu Guo and Kuniaki Uehara

Instance Selection Approach for Self-Configuring Evolutionary Fuzzy Rule Based Classification Systems 574
Vladimir Stanovov, Eugene Semenkin, and Olga Semenkina

Co-operation of Biology Related Algorithms for Multi-objective Binary Optimization 580
Shakhnaz Akhmedova and Eugene Semenkin

Medical Image Analysis of MRI Brain Images by Deep RBF GMDH-type Neural Network Using Principal Component-Regression Analysis 586
Tadashi Kondo, Junji Ueno, and Shoichiro Takao

Adaptive Domotic System in Green Buildings 593
Diego Rodríguez-Gracia, José A. Piedra-Fernández, and Luís Iribarne

Memetic Self-Configuring Genetic Programming for Solving Machine Learning Problems 599
Maria Semenkina and Eugene Semenkin

Silhouette Web Browser: Toward an Integration of Web and Desktop Applications Based on Transparent Layers for Collaborative Works 605
Akihiro Sugiyama, Yusuke Niwa, Shun Shiramatsu, Tadachika Ozono, and Toramatsu Shintani

Sponsored Search Auction Considering Combinational Bids with Externalities 611
Ryusuke Imada and Katsuhide Fujita

A Local Adaptive Perfect Coalition Structure Generation Problem Considering Coalition Breakup 617
Katsuya Nakano, Shun Shiramatsu, Tadachika Ozono, and Toramatsu Shintani

Toward an Agent-Based Framework for Better Access to Open Data by Using Ontology Mappings and their Underlying Semantics 623
Naoki Fukuta

Trend Extraction Method Using Co-occurrence Patterns from Tweets 629
Shotaro Noda and Katsuhide Fujita

ICTA 2015

Visualization of Activities-Related Information for Supporting Active Aged Persons 635
Yang Wonseok, Yuta Kato, and Seok Wangmi

A Framework Proposal of UX Evaluation of the Contents Coherency on Multi-screens 639
Seok Wangmi

Market Mechanism for Trading Perishable Goods 646
Kazuo Miyashita

Proposal of a Method to Evaluating Adaptability of Farmland for Cultivating Vegetables 654
Yuuki Yamashita, Yuuki Yamasaki, Noriko Horibe, and Shin-Ichi Aoqui

Development of Web System to Find Control Rules from Environmental Data on Farmland 659
Yuuki Yamasaki, Keiichi Matsumoto, Yuuki Yamashita, Noriko Horibe, and Shin-Ichi Aoqui

Research on Soil Moisture Measurement Using Moisture Sensor 663
Daisuke Hatanaka, Alireza Ahrary, and Dennis Ludena

Research Studies on the Agricultural and Commercial Field 669
Alireza Ahrary and Dennis Ludena

Bacteria Sterilization by Laser Ablation Plasma Using Several Metal Target 674
Hiroharu Kawasaki, Tamiko Ohshima, Yoshihito Yagyu, Takeshi Ihara, and Yoshiaki Suda

The Use of Ozone Generated by Surface Discharge for Advanced Agriculture 678
Tomoya Abiru, Fumiaki Mitsugi, Tomoaki Ikegami, Kenji Ebihara, Shin-Ichi Aoqui, and Kazuhiro Nagahama

Oxygen Atom Number Density Measurement in Microwave Excited Atmospheric Pressure O2-Ar Mixture Gas Plasma Using Electric Current Heated Catalytic Probe 682
Shigeru Ono

Interaction of Atmospheric Serpentine Plasma and Green Mold under a High Nutrition Condition 686
Shin-Ichi Aoqui, Noriko Horibe, Fumiaki Mitsugi, Kazuhiro Nagahama, and Hiroharu Kawasaki

Plasma Sterilization of Anthrax Pathogen in Water Mist 690
Masaru Tominaga, Toshiyuki Tanaka, Tatsuya Sakoda, Norikazu Mizoguchi, and Yoshiyuki Kushima

Treatment of Persistent Organic Pollutants in Wastewater by Nano-Seconds Pulsed Discharge Plasma 695
Shintaro Kodama, Satoru Matsumoto, Douyan Wang, Takao Namihira, and Hidenori Akiyama

AAI 2015 Posters

Saving Energy by Reducing the Number of Elevators in Service: Analysis of Effectiveness Using Multi-agent Simulation 701
Akira Hamada, Kayo Iizuka, and Yasuki Iizuka

Customized Attendance System for Students' Sensibility Monitoring and Counseling 703
Young-Duk Kim, Soon Kwon, Junkwang Kim, and Wooyoung Jung

Iterative CFO and Channel Estimation for Cooperative Communication Systems 705
Tsui-Tsai Lin

Difference in Bi-articular Muscle during Postural Fixation between Dominant and Non-dominant Arms 707
Takashi Oyama and Akihito Sako

ConfVisor: A Task Management System for Non-professional Convention Planners 709
Tokuro Matsuo and Toshikazu Fukushima

Using Constructivism as a Basic Idea to Design Multi-situated Game-Based Learning Platform and ITS Application 711
Sung-Chiang Lin, Charlotte Wang, Chun-Yu Lo, You-Wei Chang, Hsin-Yi Lai, and Pei-Lun Hsu

The Influence of Bionic Creatures and Natural Condition on Design Inspirtation 713
Wan-ting Chiu and Shu-Chuan Tseng

Summarizing Results of Keyword Search on Social Photos Using Clustering-Based Burst Detection 715
Tatsuhiro Sakai and Keiichi Tamura

A Detection Method Based on a Marker Attached on the Cattle in the Shed 717
Junkwang Kim, Woo Young Jung, Soon Kwon, and Young Duk Kim

A Fashion-Brand Recommender System Using Brand Association Rules and Features 719
Yuka Wakita, Kenta Oku, Hung-Hsuan Huang, and Kyoji Kawagoe

Proposal of Kernel Rootkits Detection Method by Monitoring Branches Using Hardware Features 721
Yohei Akao and Toshihiro Yamauchi

Application of Mobile Navigation Systems in Social Networks of Historic Sites 723
Pei-Ling Wu, Ming-Shih Chen, Yi-Fang Kao, and Li-Li Guo

Valence Bond©-Integrating Scientific Visualization Mechanism in a Tower Defense Game for Chemical Bond Concept Learning in High School 725
Ying-Chen Lin, Jia-Wei Yan, Hsin-Hung Yu, Ming-Chaun Li, Chia-Ping Wang, Tsai-Fang Yu, and Huei-Tse Hou

Jingnan Campaign© - Using Game-Based Assessment with the Mechanism of Strategy Games for History Teaching: System Development and Learning Evaluation 727
Hsin-Hung Yu, Jhih-Kai Yang, Hao-Wei Chen, Tsai-Fang Yu, and Huei-Tse Hou

Author Index 729