CONTENTS

VOLUME VI

INFORMATION SYSTEMS, TECHNOLOGIES AND APPLICATIONS: I

Contents

Data Mining and Knowledge Representation

Kandara, Mehtap; Kandara, Osman (USA): "Association Rules to Recover the Missing Data Value for an Attribute in a Database" • 1

Liu, Mei; Luan, Shao-hua; Liu, Wei-dong; Sun, Yong-li; Quan, Tai-fan (China): "Multi-sensor Data Fusion Methods Based On The NFE Model" 7


Wang, Hui; Li, Qinghua; Jiang, Shengyi; Ma, Chuanxiang (China): "MinMax: A New Algorithm for Maximal Frequent Pattern Mining" 19

Development Methods and Methodologies

Artelsmair, Christine; Wagner, Roland (Austria): "Towards a Security Engineering Process" 22

Bhoopalam, Kailash P.; Mukkamala, Ravi (USA): "Using Secure Mobile Agents as Information Brokers" 28

Das, Asesh (USA): "UML for Fuzzy Ontology Engineering" 34

Elsas, Alexander (Germany): "Ad-hoc Cooperation with Web Services" 39

Gayed, Grant; Deugo, Dwight (Canada): "A Model for the Application of Object-Oriented Refactorings" 45

Huang, Jinghua; Wang, Liao; Zhao, Chunjun (China): "Comparative Study on Web-based Systems Design Methodologies: History and Category" 52

Huisman, Magda *; Iivari, Juhani ** (* South Africa, ** Finland): "Reasons why Systems Development Methodologies are Not Used" 57

Lee, Ching-Cheng; Yang, Yixin (USA): "Early Detection and Data Analysis on Web Mining for Relevance" 62

Li, Xiaohua; Shen, Lansun (China): "Automatic Text Location Based on Discrete Wavelet Transform" 67

Pai, Wen C. (Taiwan): "A Design Validation Strategy based on Process Flow Analysis" 73
Vilapakkam Nagarajan, Srivalli; Garcia, Omar; Croll, Peter (Australia): "Elements of Software Risks in Agile Software Development Methods and their effects on Software Quality"

Vilapakkam Nagarajan, Srivalli; Garcia, Omar; Croll, Peter (Australia): "A new approach for enhancing the effectiveness of XP projects through effective XP training based on reports from the field"

Wong, Gary Yat Chung; Chun, Hon Wai (Hong Kong): "Ghost Project - The Advance Constraint Programming Tool"

Zhao, Dehua *; Yu, Byunggu *; Randolph, Dan *; Hong, Bong H. ** (* USA, ** Korea (South)): "Relational Geographic Databases"

Zong, Nuannuan; Adjouadi, Malek (USA): "Multidimensional Pattern Recognition and Classification of White Blood Cells Using Support Vector Machines"

Education and Information Systems

Ditters, Everhard (The Netherlands): "An AGFL for the Description of Non-coinciding Phrasal Heads"

Fadini, Bruno; Maresca, Paolo (Italy): "Two Tools for The Basic Informatic Formation And Certification: ECDL and Distance Learning, The CampusOne Project In The Italian Universities"

Lê, Tang-Ho; Lamontagne, Luc (Canada): "A Collaborative Authoring Tool for Knowledge Management"

Maresca, Paolo (Italy): "Adaptable learning in a collaborative environment for the university didactics"

Poobrasert, Onintra (Thailand): "Educational Support Systems for Special Needs Students"

Qin, Li; Fang, Wei (USA): "Web-based Instructional Resources Management System"

Sirirangsi, Pakavadi (Thailand): "Learning Behaviour via Electronic Media: A Case of Undergraduate Students' Activities in Bangkok, Thailand"

Stix, Volker *; Uren, Victoria S. ** (* Austria, ** UK): "Semantic Structuring of Concepts Found in Scholarly Literature: An Empirical Study Using a Fuzzy Clustering Approach"

Trakhtenbrot, Mark (Israel): "Interactive Tools for Teaching Automata and Formal Languages"

Wuttke, Heinz-Dietrich; Fleischer, Alexander; Fengler, Wolfgang (Germany): "Class concept for Living Pictures"
Educational Support Systems, Computer Assisted Instruction and Applications – Invited Session
Organizer: Elizabeth Hansen (USA)

Altergott, Patricia; James, Scott; Hansen, John; Bidgoli, Moe (USA): "Design and Implementation of a State-Wide High School Programming Contest"

Hansen, John; Hansen, Elizabeth; Hammersmith, Sue (USA): "Technology Based and Non-Technology Based Means of Enhancing Student Performance in low Level Math Courses"

Hansen, Elizabeth A.; Richardson, Carole; James, Scott (USA): "The Value of LMS Assessment to E-Learning Evaluation"

Richardson, Carole; Hansen, John; Hansen, Elizabeth; James, Scott (USA): "Program Structure as Perceived by Computer Science and Computer Information System Students"

Richardson, Carole; Hansen, Elizabeth; Rubin, Stuart (USA): "Improving Traditional Education Through Use of E-Learning Technologies"

Human Information Systems

Alan, Yilmaz; Zelewski, Stephan; Schütte, Reinhard (Germany): "Implementation of Knowledge Spaces in Ontologies"

Ebina, Tsuyoshi (Japan): "@talk - cellular phone web browser for the elderly people"

Kim, Kibum; Rosson, Mary Beth (USA): "Predicting End-Users' Behaviors by Applying Microprocessor Branch Prediction Algorithms to Session Logs of a Networked Community"

Lee, Il-Lo; Park, Jong-Hwan; Ahn, Byung-Ha (Korea (South)): "Hand Input Device using Wrist Camera"

Information Retrieval

Akhtar, Shazia; Reilly, Ronan G.; Dunnion, John (Ireland): "Automating XML Markup using Machine Learning Techniques"


Chiou, Andy S.; Lin, Chilan; Chiu, Monica Juhui (Taiwan): "Path Match Graph - An Indexing System for Semi-structured Data"

Fan, Xien; Sheng, Fang; Thomas, Gary; Ng, Peter A. (USA): "A Framework of Personalized Intelligent Document and Information Management System"

Huang, Ruizhang; Lam, Wai; Law, Yin-Yee (Hong Kong): "Discovering Multilingual News Events and Term Association from the Web"
Weideman, Melius; Kritzinger, Wouter (South Africa): "Search Engine Information Retrieval: Empirical Research on the usage of Meta Tags to enhance Web Site Visibility and Ranking of e-Commerce Web Sites" 231

**Information Systems Development**

Guan, Luqi; Guan, Jennifer Z. (USA): "A Software Engineering Tool Set for Requirement Document based Prototyping" 237

Hahn, Hee Il; Joung, Joung Koo (Korea (South)): "Real-time Implementation of Two-dimensional Barcode Decoder for PDF417" 244

McBride, Maranda; Ntuen, Celestine (USA): "The Development of a Bias Metric for Use with Automated Decision Aids" 248

McDole, Thoren; Cua, Haipin; Huang, Chang; Kania, Leon; Dascalu, Sergiu; Harris Jr., Frederick C. (USA): "Software Specification of the GORT Environment for 3D Modeling" 254

Suzuki, Junichi; Kameyama, Wataru (Japan): "A Proposal on Flexible Metadata Exchange Model Based on Metadata Fragmentation" 260

Wu, Xiaojun; Zhou, Xingshe; Gu, Jianhua (China): "The Research and Implementation of a General-Purpose Automated Software Testing Infrastructure" 266

Zhang, Li; Bieber, Michael (USA): "Hypermedia In Dynamic Environments" 271

**Information Systems Management**

Deruelle, Laurent; Bounceff, Mourad (France): "GXL-based Repository of Multi-Languages Applications for Reverse Engineering Process" 276

Hsu, Fang-Ming; Tsao, Lih-Lih (China): "The Management of Knowledge Sharing System in Call Centers" 282

Li, Haifei; Jeng (JJ), Jun-Jang; Wu, Frederick Y.; Chang, Henry (USA): "An Approach of Modeling, Monitoring and Managing Business Operations for Just-In-Time Manufacturing" 288

Lim, Youn-kyung; Sato, Keiichi (USA): "Encoding Scenarios with Design Information Framework for the Generation of Multiple Aspect Models for System Implementation" 294

Lung, Chung-Horng; Zhao, Qiang (Canada): "Pattern-Oriented Reengineering of a Network System" 300


Varela, Leonilde R.; Aparicio, Joaquim N.; Silva, Silvio C. (Portugal): "An Internet System for Scheduling Problems Solving" 312
Information Systems, Technologies and Applications

Venkataraman, Archana; Sathyanarayan, Aparna; Venkataraman, Yashwant; Balasubramanian, Muthukumaran (India): "Artificial Intelligence In Cephalometry" 318

Wang, Fen V. (USA): "Will Potential Customers Welcome Our Intended DMSS Functions?" 322

Zhu, Yan; Zhang, Nan (China): "Study on Parallel Hybrid Evolutionary Algorithm and Its Application in RBF Networks" 327

Management Information Systems

Kinoshita, Hirotugu; Morizumi, Tetsuya (Japan): "An Electronic Money System based on Distributed Database" 333

Perez-Alvarez, Cesar (USA): "Task Complexity and Coordination in GSS: Uncertainty and Standardization" 339

Suomi, Reima; Kutosmanen, Jaakko; Sirkemaa, Seppo; Tähkäpää, Jarmo (Finland): "Regional Development with ICT – The Problems of a Well-off City" 345

Zolghadri, Marc; Bourrieres, Jean-Paul (France): "Data aggregation in Production management systems: from mono-dimensional to bi-dimensional aggregators" 351

Software Engineering

Halaoui, Hatem F.; Kaddoura, Yousef O. (USA): "The Effects of Object-Orientation on Software Testing and Maintenance" 357

Homayoun Far, Behrouz (Canada): "Rational Decision Making for Multiagent Systems Based on Interaction Scenarios" 364

Hwang, Yih-Feng; Rine, David C. (USA): "Integrating Information Distribution Systems: A Framework and Verification Algorithms" 370

Pereira, Javier; Cerpa, Narciso (Chile): "Using the System Modular Analysis Approach to Represent the Level 2 of the CMM-SW" 376

Vanderperren, Wim; Suvee, Davy; Jonckers, Viviane (Belgium): "Automatic Feature Interaction Analysis in PacoSuite" 382

User Interface, Human Factors and Interactive Systems

Crapo, Andrew W.; Aragones, Amy V.; Price, Joseph E.; Varma, Anil (USA): "Using Ontology to Drive an Adaptive Learning Interface" 388

Myrick, Stephanie A.; Lohrenz, Maura C.; Gendron, Marlin L.; Trenchard, Michael E.; Riedlinger, Lancelot M. (USA): "Moving Map Composer: A Tool For Consolidating Tasks Associated With The Design, Creation, And Management Of Digital Aeronautical Chart Products For Navy Aircraft" 394
Sesin, Anaclis; Adjouadi, Malek; Ayala, Melvin (USA): "A Calibrated, Real-Time Eye Gaze Tracking System as an Assistive System for Persons with Motor Disability"

399

Swanson, Eric H.; Galvao, Adriano B.; Sato, Keiichi (USA): "A Framework for Understanding Contexts in Interactive Systems Development"

405

Zeltzer, David; Kohlhammer, Jörn (USA): "Knowledge-Based Interactive Visualization for Time-Critical Decision Making"

409

Author Index

415