Contents

SESSION: WORLDCOMP/IKE KEYNOTES

WORLDCOMP/IKE Keynote: Computing with Words and Perceptions - A Paradigm Shift
Lotfi A. Zadeh

WORLDCOMP/IKE Keynote: Cloud Computing - The Next Revolution in Information Technology
Rajkumar Buyya

SESSION: BUSINESS INTELLIGENCE

Web Usage Mining with Fine-Grained Browsing Activity Tracking
Sweta Shinde, Chengyu Sun, Huiping Guo

Methodologies and Systems for Developing EcoRiskManager a Tool for Managing the Ecosphere of Risk
Edwin McPherson, Albert Decker, Orville Miller

Comparing Business Rule Extraction Approaches
Andrew J. McAllister, Mathieu Cambillau

Reflections on How to Improve Software Process Patterns Capitalization and Reuse
Nahla Jlaiel, Mohamed Ben Ahmed

Business Intelligence (BI)-Where Do We Stand?
Muhammad Irfan Rafiq, Saleem Zubair Ahmed, Muhammad Usman Mirza

Context Modeling with Adaptive Intelligence-How Can it Help in Designing Digital Library Architecture
Tracey Amey, Asesh Das, Y.V. Ramana Reddy, Luyi Wang, Sumitra Reddy

SESSION: KNOWLEDGE MANAGEMENT AND PERFORMANCE

Improving the Performance of Bayesian Belief Network Classifiers via Decision Tree Based Feature Selection
Tatdow Pansombut, Brent Harrison, Dennis Bahler, Nagiza Samatova

Performance Evaluation of a Knowledge-based Solution for Detecting Money Laundering in an Investment Bank
Nhien An Le Khac, Sammer Markos, M-Tahar Kechadi
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensionality Reduction of Accident Databases for Minimal Tradeoff in Prediction Accuracy</td>
<td>64</td>
</tr>
<tr>
<td>Tatiana Tambouratzis, Miltiadis Chalikias, Dora Souliou, Andreas Gregoriades</td>
<td></td>
</tr>
<tr>
<td>Data Stream Transformation and Query Node Arrays: A New Way to Evaluate Tree Pattern Queries</td>
<td>72</td>
</tr>
<tr>
<td>Yangjun Chen</td>
<td></td>
</tr>
<tr>
<td>Practical Approach of Knowledge Management in Medical Science</td>
<td>79</td>
</tr>
<tr>
<td>Mahdi Bohlouli, Patrick Uhr, Fabian Merges, Sanaz Mohammad Hassani, Madjid Fathi</td>
<td></td>
</tr>
<tr>
<td>Enhancing File System Visualization Using Conceptual File Management</td>
<td>85</td>
</tr>
<tr>
<td>Ali Sajedi Badashian, Seyyed Hamidreza Afzali, Morteza Ashurzad Delcheh, Iman Khalkhali, Mohammad Shoja Shafiei</td>
<td></td>
</tr>
<tr>
<td>An Attribute-Oriented Induction Approach for Knowledge Discovery from Relational Databases</td>
<td>92</td>
</tr>
<tr>
<td>Shu-Meng Huang, Cheng-Chu Lung, Ping-Yu Hsu</td>
<td></td>
</tr>
<tr>
<td>Impact of Knowledge Sharing in Supply Chain Networks</td>
<td>98</td>
</tr>
<tr>
<td>Touhid Bhuiyan</td>
<td></td>
</tr>
<tr>
<td>Designing of a Personal Knowledge Management System</td>
<td>104</td>
</tr>
<tr>
<td>Fernando J. Sanchez-Zamora, Martin Llamas-Nistal, Manuel J. Fernandez-Iglesias</td>
<td></td>
</tr>
<tr>
<td>SESSION: INFORMATION MANAGEMENT</td>
<td></td>
</tr>
<tr>
<td>Derivation of Design Rainfall Temporal Patterns in Australia's Gold Coast Region</td>
<td>113</td>
</tr>
<tr>
<td>Touhid Bhuiyan, Ataur Rahman, Scott Abbey</td>
<td></td>
</tr>
<tr>
<td>The Impact of Visual and Background Music Congruity On Media Commercial's Information Effectiveness</td>
<td>120</td>
</tr>
<tr>
<td>Chandan Sarkar</td>
<td></td>
</tr>
<tr>
<td>Context-Aware Mobile Information Systems: Data Management Issues and Opportunities</td>
<td>127</td>
</tr>
<tr>
<td>Edgar Benitez-Guerrero</td>
<td></td>
</tr>
<tr>
<td>Extracting Information from Semi-Structured Web Pages by Considering User's Context</td>
<td>134</td>
</tr>
<tr>
<td>Mahmoud Shaker, Hamidah Ibrahim, Ali Alwan, Aida Mustapha, Lili Nurliyana Abdullah</td>
<td></td>
</tr>
<tr>
<td>Enterprise Information Architecture for Traceability</td>
<td>140</td>
</tr>
<tr>
<td>Ben Bovee</td>
<td></td>
</tr>
<tr>
<td>Using Machine-Learning Techniques for Plant Communities Classification</td>
<td>146</td>
</tr>
<tr>
<td>Ahmad A.M. Al-Modayan, Mohammed Abdel Razek</td>
<td></td>
</tr>
</tbody>
</table>
Multi-level Association Rules Processing toward Information Extraction and Prediction

Marjaneh Safaei, Mustafa Ilkan

SESSION: NOVEL TECHNIQUES

Building a Multi-Scenario Asset Allocation System Using Two-Phase Contract Network Protocol

Hilary Cheng, Yi-Chuan Lu, Wei-Hsiao Wang

Challenges in Matching Heterogeneous Relational Databases’ Schemas

Yaser Karasneh, Hamidah Ibrahim, Mohamed Othman, Razali Yaakob

A Framework for Developing a Postal Code System for Jamaica

Ray Williams, Sherrene Bogle, Vanesa Tennant

A Context-Aware Authentication Approach Based on Behavioral Definitions

Cristiano Rocha, Joao Lima, Matheus Viera, Miriam Capretz, Michael Bauer, Iara Augustin, Mario Dantas

Building a Digital Library for Large P2P Networks

Mustafa Hasan, Dinesh Kumar Saini

Research through Social Network

Wasim A. Khan, Kashan Ali Khan, Syed Shabib Ahsan

Active Datawarehouse Loading by Tool Based ETL Procedure

Mallikharjuna Reddy V, Sanjay K Jena

Using Reflective Guides to Capture Software Projects Experience

Gerardo Matturro, Andres Silva

SESSION: APPLICATIONS

A Basic Emotions Based Semantic Differential Method for Products Classification in Emotional Design

Yuexiang Huang, Chun-Hsien Chen, Li Pheng Khoo

A Web-Based System for Problem Solving Course and Programming Contest Judging and Management

Herman Meyer, Ali Orooji

Mapping the Financial Structure in a Loan Default Prediction Model

Hilary Cheng, Yi-Chuan Lu, Ping Heng Tsai
A Pseudo Bargaining Formulation For Servicing Vessels During Transshipment Operations
Nabil Nehme, Mariette Awad

A Competence Management Supported by Recommendation Mechanism
Wagner Silva, Stainam Brandao, Marco Vaz, Jano Souza

Application of Aerial Photos and Satellite Images for Analysis Urban Landscape Changes; Case Study of Tehran
Maryam Yousefi, Morteza Adib, Seyed Hassn Toghvaei

Integration of a Profiling Sensor onto Sensor Fabric
Joseph Qualls, David Russomanno, Vinay Bollu

Amazigh Search Engine: Tifinaghe Character Based Approach
Fadoua Ataa Allah, Siham Boulaknadel

SESSION: ALGORITHMS AND THEORY

Activity-based Methodology for Mining Workflow Duration Outlier
MinTzu Wang, PingYu Hsu, Yu-Cheng Chuang, Yuan-Cheng Chang

Elliptic Curve Cryptography using Mirrored Elliptic Curves over Prime Fields
Srinath M.S., Venkatachalam Chandrasekaran

A Mobile, Context Aware System for Memory Support and Planning
Mauro Migliardi, Petrus Prasetyo Anggono

Bayesian Network Based Agent Decision Mechanism
Safiye Sencer

An Approach to Compositional Adaptation based on Merging Solution Graphs via Inexact Matching
Kambiz Badie, Maryam Tayefeh Mahmoudi

Grey Relation Based Fuzzy Data Mining
Safiye Sencer

An Efficient Approach for Preventing Disclosure of Sensitive Association Rules in Databases
Chirag Modi, Udai Pratap Rao, Dhiren R. Patel

On Searching in Association Rule Mining Tightly Coupled with Time Variant Databases
Jin Young Kim, Seonggyu Kim
SESSION: GLOBAL CONTEXTUAL PROCESSING AND FOUNDATIONS, ISSUES AND MANAGEMENT IMPLEMENTATION

Potential Application of Contextual Information Processing To Data Mining
Gregory Vert, Anitha Chennamaneni, S.S. Iyengar

Applying Contextual Processing to Traffic Signal Control Systems
Ray Mahlke, Gregory Vert, Anitha Chennamaneni

Self-Synchronizing Moving Objects Using Contextual Information
Amol Khedkar, Vijay Kumar

Hyper Distribution of Contextual Information: Solving the Unknown Producer-Unknown Consumer (UP-UC) Problem
Jean Gourd, Gregory Vert

Towards Context-Aware Real-Time Information Dissemination
Kyoung-Don Kang, Greg Vert

Building a Contextual Sensor Network Using Automated Bots
Ken Miguel Hughes, Anitha Chennamaneni

SESSION: NEW TRENDS IN DATA MINING

Considerations on Collaborative ERP Implementation Planning: A Design Science Approach
Babak Akhgar, Iman Raeesi Vanani, Vahid Oskuee

Applying Vector Space Model to Desktop Search Engine
Manjit Riat, Kazem Taghva

An Overview of Open Source Data Quality Tools
Val Pushkarev, Henry Neumann, Cihan Varol, John Talburt

How DSS Development Procedure and Components Can Answer the Requirements of Knowledge Management Development
Vahid Oskuee, Iman Raeesi, Babak Akhgar

A Conceptual Model for Measuring the Quality of e-learning through Knowledge Sharing Indicators
Iman Raeesi, Davood Qorbani, Babak Akhgar

Towards a Decision Support System for Comparing Software Development Methodologies from a CMMI Perspective
Farrukh Saeed, Jawed Siddiqi, Babak Khazaei, Saeed Nawaz
Towards a Business Framework for Cloud Computing: Consumer and Provider Perspective 396
Saeed Nawaz, Jawed Siddiqi, Babak Khazaei, Farrukh Saeed

Web Mining Applications for Mobile Devices 404
Mark Smith

Association Analysis of the Working Environment and SOD Enzyme Behavior of Workers in a Factory Setting 409
Ray Hashemi, Mahmood Bahar, Azita Bahrami, Russell Smith