Table of Contents – Part I

Generic Intelligent Systems

Artificial Neural Networks and Connectionists Systems

Integration of Ant Colony SOM and K-Means for Clustering Analysis ................................................................. 1
    Sheng-Chai Chi, Chih Chieh Yang

An Improved Text Categorization Methodology Based on Second and Third Order Probabilistic Feature Extraction and Neural Network Classifiers ................................................................. 9
    Dimitrios A. Karras

An Improved OIF Elman Neural Network and Its Applications to Stock Market ........................................................................... 21
    Limin Wang, Yanchun Liang, Xiaohu Shi, Ming Li, Xuming Han

Fuzzy and Neuro-fuzzy Systems

Fuzzy Logic Controller for Turbojet Engine of Unmanned Aircraft ................................................................. 29
    Min Seok Jie, Eun Jong Mo, Gyo Young Hong, Kang Woong Lee

Fuzzy Linear Programming Approach to Multi-mode Distribution Planning Problem ................................................................. 37
    Bilge Bilgen, Irem Ozkarahan

Hardware Implementation of Fuzzy Controllers-Approach and Constraints ................................................................. 46
    Amol Deshmukh, Preeti Bajaj, A.G. Keskar

The Design of Self-tuning Strategy of Genetically Optimized Fuzzy-PI Controller for HVDC System ................................................................. 52
    Zhong-xian Wang, Jueng-je Yang, Tae-chon Ahn
Evolutionary Computation

A Hybrid Evolutionary Algorithm for the Euclidean Steiner Tree Problem Using Local Searches ........................................ 60
Byoung hak Yang

Use of Cluster Validity in Designing Adaptive Gabor Wavelet Based Face Recognition ........................................ 68
Eun Sung Jung, Phill Kyu Rhee

Self-adaptive Classifier Fusion for Expression-Insensitive Face Recognition ........................................ 78
Eun Sung Jung, Soon Woong Lee, Phill Kyu Rhee

Improved Harmony Search from Ensemble of Music Players ............... 86
Zong Woo Geem

Performance Comparison of Genetic and Tabu Search Algorithms for System Identification ........................................ 94
Aytekin Bagis

Towards Self-configuring Evolvable FPGA Using Feedback Cross-Checking ........................................ 102
Robert Ross, Richard Hall

A Self-adjusting Load Sharing Mechanism Including an Improved Response Time Using Evolutionary Information ............... 110
Seonghoon Lee, Donghee Shim, Dongyoung Cho

A New Memetic Algorithm Using Particle Swarm Optimization and Genetic Algorithm ........................................ 122
Sang-Moon Soak, Sang-Wook Lee, Nitai gour Premchand Mahalik, Byung-Ha Ahn

Mathematical and Empirical Analysis of the Real World Tournament Selection ........................................ 130
Sang-Wook Lee, Sang-Moon Soak, Nitai gour Premchand Mahalik, Byung-Ha Ahn, M.G. Jeon

Link Mass Optimization of Serial Robot Manipulators Using Genetic Algorithm ........................................ 138
Serdar Kucuk, Zafer Bingul
Machine Learning and Classical AI

An Algorithm for Eliminating the Inconsistencies Caused During Discretization .................................................. 145
Honghai Feng, Baoyan Liu, LiYun He, Bingru Yang, Yumei Chen,
Shuo Zhao

A Combinational Clustering Method Based on Artificial Immune System and Support Vector Machine ..................... 153
Zhonghua Li, Hong-Zhou Tan

User Preference Through Learning User Profile for Ubiquitous Recommendation Systems ................................... 163
Kyung-Yong Jung

Automated Recognition of Cellular Phenotypes by Support Vector Machines with Feature Reduction ..................... 171
Yong Mao, Zheng Xia, Daoying Pi, Xiaobo Zhou, Yong Sun,
S.T.C. Wong

Power Transformer Fault Diagnosis Using Support Vector Machines and Artificial Neural Networks with Clonal Selection Algorithms Optimization ....................................................... 179
Ming-Yuan Cho, Tsair-Fwu Lee, Shih-Wei Gau,
Ching-Nan Shih

A Semi-naive Bayesian Learning Method for Utilizing Unlabeled Data ................................................................. 187
Chang-Hwan Lee

Quantitative and Ordinal Association Rules Mining (QAR Mining) ........................................................................ 195
Filip Karel

Extraction of Spatial Rules Using a Decision Tree Method: A Case Study in Urban Growth Modeling ......................... 203
Jungyeop Kim, Yunhee Kang, Sungeon Hong,
Soohong Park

Classification Using Multiple and Negative Target Rules .......................................................................................... 212
Jiuyong Li, Jason Jones

Agent Systems

Coherent Formation for Agents Using Flocking with Cellular Automata ................................................................. 220
Leo Bi, Richard Hall
Managing Emergent Processes ................................................................. 228
  John Debenham, Simeon Simoff

Teamwork Coordination in Large-Scale Mobile Agent Networks .......... 236
  Gordan Jezic, Mario Kusek, Vjekoslav Sinkovic

Real-Time Search Algorithms for Exploration and Mapping ............... 244
  In-Cheol Kim

Real-Time Control of Decentralized Autonomous Flexible
Manufacturing Systems by Using Memory and Oblivion ...................... 252
  Hidehiko Yamamoto, Jaber Abu Qudeiri, Mohammed A. Jamali

Adaptive QoS Control Mechanism in Flexible Videoconference System ... 260
  Sungdoke Lee, Dongsoo Han, Sanggil Kang

Multi-agent Architecture for Automating Satellite Control Operations
Planning and Execution ................................................................. 268
  Adriana C. Biancho, Andreia C. de Aquino, Mauricio G.V. Ferreira,
  José Demisio S. da Silva, Luciana S. Cardoso

Web-Based Agent System for Interworking Between Wired Network
Devices and Mobile Devices ......................................................... 276
  Sang Tae Kim, KeeHyun Park, Hyun Deok Kim

Load Protection Model Based on Intelligent Agent Regulation ............. 284
  Dragan Jevtic, Marijan Kunstic, Stjepan Matijasevic

Reserve Price Recommendation by Similarity-Based Time Series
Analysis for Internet Auction Systems ........................................... 292
  Min Jung Ko, Yong Kyu Lee

Use of an Intelligent Agent for an E-Commerce Bargaining System ...... 300
  Pao-Hua Chou, Kuang-Ku Chen, Meng-Jiun Wu

Automatic Classification for Grouping Designs in Fashion Design
Recommendation Agent System ....................................................... 310
  Kyung-Yong Jung

Agent Behaviour in Double Auction Electronic Market
for Communication Resources ....................................................... 318
  Krunoslav Trzec, Ignac Lovrek, Branko Miskac
Knowledge Based and Expert Systems

Using Prototypical Cases and Prototypicality Measures for Diagnosis of Dysmorphic Syndromes ................................................................. 326
   Rainer Schmidt, Tina Waligora

ISOR: An Expert-System for Investigations of Therapy Inefficacy ................................................................. 334
   Rainer Schmidt, Olga Vorobieva

Reengineering for Knowledge in Knowledge Based Systems ...................... 342
   Anne Häkansson, Ronald L. Hartung

Knowledge Representation for Knowledge Based Leadership System .................. 352
   Ronald Hartung, Anne Häkansson

Modeling of the Vocational Suggestion with Restrictions (Graph Theory Approach) ................................................................. 360
   Gregor Molan, Marija Molan

Robust Eye Detection Method for Varying Environment Using Illuminant Context-Awareness ................................................................. 368
   Mi young Nam, Eun Jin Koh, Phill Kyu Rhee

INMA: A Knowledge-Based Authoring Tool for Music Education ............... 376
   Maria Virvou, Aristomenis S. Lampropoulos,
   George A. Tsihrintzis

ALIMOS: A Middleware System for Accessing Digital Music Libraries in Mobile Services ................................................................. 384
   Paraskevi S. Lampropoulou, Aristomenis S. Lampropoulos,
   George A. Tsihrintzis

Personalization Method for Tourist Point of Interest (POI) Recommendation .................. 392
   Eui-young Kang, Hanil Kim, Jungwon Cho

Hybrid Intelligent Systems

Architecture of RETE Network Hardware Accelerator for Real-Time Context-Aware System ................................................................. 401
   Seung Wook Lee, Jong Tae Kim, Hongmoon Wang, Dae Jin Bae,
   Keon Myung Lee, Jee Hyung Lee, Jae Wook Jeon
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Combination of Simulated Annealing and Ant Colony System for the Capacitated Location-Routing Problem</td>
<td>409</td>
</tr>
<tr>
<td>Lyamine Bouhafs, Amir Hajjam, Abder Koukam</td>
<td></td>
</tr>
<tr>
<td>An Automatic Approach for Efficient Text Segmentation</td>
<td>417</td>
</tr>
<tr>
<td>Keke Cai, Jiajun Bu, Chun Chen, Peng Huang</td>
<td></td>
</tr>
<tr>
<td>Design and Configuration of a Machine Learning Component for User Profiling in a Declarative Design Environment</td>
<td>425</td>
</tr>
<tr>
<td>Georgios Bardis, Georgios Miaoulis, Dimitri Plemenos</td>
<td></td>
</tr>
<tr>
<td>Emotional Intelligence: Constructing User Stereotypes for Affective Bi-modal Interaction</td>
<td>435</td>
</tr>
<tr>
<td>Efthymios Alepis, Maria Virvou</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Intelligent Algorithms</td>
<td></td>
</tr>
<tr>
<td>Garbage Collection in an Embedded Java Virtual Machine</td>
<td>443</td>
</tr>
<tr>
<td>Chang-II Cha, Hyung-Jun Kim, Kyu-Jeong Hwang, Sang-Wook Kim, Sang-Yun Lee, Hee-Sun Won</td>
<td></td>
</tr>
<tr>
<td>Design of Flexible Authorization System and Small Memory Management for XML Data Protection on the Server</td>
<td>451</td>
</tr>
<tr>
<td>Sun-Moon Jo, Weon-Hee Yoo</td>
<td></td>
</tr>
<tr>
<td>A Hybrid Heuristic Algorithm for HW-SW Partitioning Within Timed Automata</td>
<td>459</td>
</tr>
<tr>
<td>Geguang Pu, Zhang Chong, Zongyan Qiu, Zuoquan Lin, He Jifeng</td>
<td></td>
</tr>
<tr>
<td>Performance Analysis of WAP Packet Transmission Time and Optimal Packet Size in Wireless Network</td>
<td>467</td>
</tr>
<tr>
<td>Il-Young Moon</td>
<td></td>
</tr>
<tr>
<td>Using Artificial Intelligence in Wireless Sensor Routing Protocols</td>
<td>475</td>
</tr>
<tr>
<td>Julio Barbancho, Carlos León, Javier Molina, Antonio Barbancho</td>
<td></td>
</tr>
<tr>
<td>Design and Evaluation of a Rough Set-Based Anomaly Detection Scheme Considering Weighted Feature Values</td>
<td>483</td>
</tr>
<tr>
<td>Ihn-Han Bae, Hwa-Ju Lee, Kyung-Sook Lee</td>
<td></td>
</tr>
<tr>
<td>ATM Based on SPMF</td>
<td>490</td>
</tr>
<tr>
<td>Dae-Young Choi</td>
<td></td>
</tr>
</tbody>
</table>
Using Rough Set to Induce More Abstract Rules from Rule Base .................................................. 498
   Honghai Feng, Baoyan Liu, LiYun He, Bingru Yang, Yueli Li, Shuo Zhao

Dynamic Calculation Method of Degree of Association Between Concepts ........................................... 506
   Noriyuki Okumura, Takayoshi Araki, Hirokazu Watabe, Tsukasa Kawaoka

Combining Fuzzy Cognitive Maps with Support Vector Machines for Bladder Tumor Grading ......................... 515
   Elpiniki Papageorgiou, George Georgoulas, Chrysostomos Stylios, George Nikiforidis, Peter Groumpos

Applications of Intelligent Systems

Intelligent Vision and Image Processing

Image Classification by Fusion for High-Content Cell-Cycle Screening .................................................. 524
   Tuan D. Pham, Dat T. Tran

Adaptive Context-Aware Filter Fusion for Face Recognition on Bad Illumination ...................................... 532
   Nam Mi Young, Md. Rezaul Bashar, Phill Kyu Rhee

A Study on Content Based Image Retrieval Using Template Matching of Wavelet Transform ......................... 542
   Duck Won Seo, Kang Soo You, Hoon Sung Kwak

Semantic Decomposition of LandSat TM Image .................................................................................. 550
   Miguel Torres, Giovanni Guzmán, Rolando Quintero, Marco Moreno, Serguei Levachkine

Vision-Based Semantic-Map Building and Localization ........................................................................ 559
   Seungdo Jeong, Jounghoon Lim, Il Hong Suh, Byung-Uk Choi

Merging and Arbitration Strategy for Robust Eye Location ........................................................................ 569
   Eun Jin Koh, Phill Kyu Rhee

Head Gesture Recognition Using Feature Interpolation ........................................................................ 582
   Yeon Gu Kang, Phill Kyu Rhee
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Stereovision Based Advanced Airbag System</td>
<td>590</td>
</tr>
<tr>
<td><em>Seok-Joo Lee, Yong-Guk Kim, Min-Soo Jang, Hyun-Gu Lee, Gwi-Tae Park</em></td>
<td></td>
</tr>
<tr>
<td>Context-Based Approach for Human Gesture Analysis</td>
<td>598</td>
</tr>
<tr>
<td><em>Chil-Woo Lee, Jae-Yong Oh, Yang-Weon Lee</em></td>
<td></td>
</tr>
<tr>
<td>Adaptive Implicit-Camera Calibration in Photogrammetry Using Anns</td>
<td>606</td>
</tr>
<tr>
<td><em>Erkan Beşdok, Pınar Çivicioğlu</em></td>
<td></td>
</tr>
<tr>
<td>Applying A-Priori Knowledge for Compressing Digital Elevation Models</td>
<td>614</td>
</tr>
<tr>
<td><em>Giovanni Guzmán, Rolando Quintero, Miguel Torres, Marco Moreno</em></td>
<td></td>
</tr>
<tr>
<td>Evaluation of the Perceptual Performance of Fuzzy Image Quality Measures</td>
<td>623</td>
</tr>
<tr>
<td><em>Ewout Vansteenkiste, Dietrich Van der Weken, Wilfried Philips, Etienne Kerre</em></td>
<td></td>
</tr>
<tr>
<td>A New Color Image Enhancement Algorithm for Camera-Equipped Mobile Telephone</td>
<td>631</td>
</tr>
<tr>
<td><em>Zhengyou Wang, Quan Xue, Guobin Chen, Weiming Zeng, Zhijun Fang, Shiqian Wu</em></td>
<td></td>
</tr>
<tr>
<td>Human Arm-Motion Classification Using Qualitative Normalised Templates</td>
<td>639</td>
</tr>
<tr>
<td><em>Chee Seng Chan, Honghai Liu, David J. Brown</em></td>
<td></td>
</tr>
</tbody>
</table>

**Knowledge Management and Ontologies**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Fuzzy Extension of Description Logic ALC with Comparison Expressions</td>
<td>647</td>
</tr>
<tr>
<td><em>Dazhou Kang, Baowen Xu, Jianjiang Lu, Yanhui Li</em></td>
<td></td>
</tr>
<tr>
<td>A Distributed and Fuzzy Extension of Description Logics</td>
<td>655</td>
</tr>
<tr>
<td><em>Yanhui Li, Baowen Xu, Jianjiang Lu, Dazhou Kang</em></td>
<td></td>
</tr>
<tr>
<td>Similarity Metrics for Set of Experience Knowledge Structure</td>
<td>663</td>
</tr>
<tr>
<td><em>Cesar Sanin, Edward Szczerbicki</em></td>
<td></td>
</tr>
<tr>
<td>Knowledge Management Based on Dynamic and Self-adjusting Fuzzy Models</td>
<td>671</td>
</tr>
<tr>
<td><em>Cezary Orlowski, Zdzisław Kowalczyk</em></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Knowledge Based Tools to Support the Structural Design Process</td>
<td>679</td>
</tr>
<tr>
<td>Carlos Toro, Jorge Posada, María Termeón, Joaquín Oyarzun, Juanjo Falcoń</td>
<td></td>
</tr>
<tr>
<td>Project Situations Aggregation to Identify Cooperative Problem Solving Strategies</td>
<td>687</td>
</tr>
<tr>
<td>Chaker Djaiz, Nada Matta</td>
<td></td>
</tr>
<tr>
<td>Incorporating Semantics into GIS Applications</td>
<td>698</td>
</tr>
<tr>
<td>Karina Verastegui, Miguel Martinez, Marco Moreno, Sergei Levachkine, Miguel Torres</td>
<td></td>
</tr>
<tr>
<td>Intelligent Reduction of Tire Noise</td>
<td>706</td>
</tr>
<tr>
<td>Matthias Becker, Helena Szcerbicka</td>
<td></td>
</tr>
<tr>
<td>Algorithms for Finding and Correcting Four Kinds of Data Mistakes in Information Table</td>
<td>714</td>
</tr>
<tr>
<td>Honghai Feng, Hao Xu, Baoyan Liu, Liyun He, Bingru Yang, Yueli Li</td>
<td></td>
</tr>
<tr>
<td>Relevance Ranking of Intensive Care Nursing Narratives</td>
<td>720</td>
</tr>
<tr>
<td>Hanna Suominen, Tapio Pahikkala, Marketta Hiissa, Tuvi Lehtikunnas, Barbro Back, Helena Karsten, Sanna Salanterä, Tapio Salakoski</td>
<td></td>
</tr>
<tr>
<td>Unification of Protein Data and Knowledge Sources</td>
<td>728</td>
</tr>
<tr>
<td>Amandeep S. Sidhu, Tharam S. Dillon, Elizabeth Chang</td>
<td></td>
</tr>
<tr>
<td>Ontology Fusion with Complex Mapping Patterns</td>
<td>738</td>
</tr>
<tr>
<td>Jinguang Gu, Yi Zhou</td>
<td></td>
</tr>
</tbody>
</table>

**Web Intelligence, Multimedia, e-Learning and Teaching**

Adaptive QoS for Using Multimedia in e-Learning                        | 746  |
|Hee-Seop Han, Hyeoncheol Kim                                           |

User-Centric Multimedia Information Visualization for Mobile Devices in the Ubiquitous Environment | 753  |
|Yoo-Joo Choi, Seong Joon Yoo, Soo-Mi Choi, Carsten Waldeck, Dirk Balfanz|

DAWN – A System for Context-Based Link Recommendation in Web Navigation | 763  |
|Sebastian Stober, Andreas Nürnberger                                   |
Modeling Collaborators from Learner’s Viewpoint Reflecting Common Collaborative Learning Experience ........................................ 771
Akira Komedani, Tomoko Kojiri, Toyohide Watanabe

A Multi-Criteria Programming Model for Intelligent Tutoring Planning ................................................................. 780
Ruihong Shi, Peng Lu

Intelligent Signal Processing, Control and Robotics

An Implementation of KSSL Recognizer for HCI Based on Post Wearable PC and Wireless Networks ........................................ 788
Jung-Hyun Kim, Kwang-Seok Hong

Intelligent Multi-Modal Recognition Interface Using Voice-XML and Embedded KSSL Recognizer ........................................ 798
Jung-Hyun Kim, Kwang-Seok Hong

Subband Adaptive Filters with Pre-whitening Scheme for Acoustic Echo Cancellation .................................................. 808
Hun Choi, Jae Won Suh, Hyeon-Deok Bae

A Noise Cancelling Technique Using Non-uniform Filter Banks and Its Implementation on FPGA ........................................... 817
Sang-Wook Sohn, Hun Choi, Al-Chan Yun, Jae-Won Suh, Hyeon-Deok Bae

Spiking Neural Network Based Classification of Task-Evoked EEG Signals .............................................................. 825
Piyush Goel, Honghai Liu, David J. Brown, Avijit Datta

Learning Control Via Neuro-Tabu-Fuzzy Controller .......................................................... 833
Saruwat Sujiitjorn, Sudarat Khwan-on

DSP Based Implementation of Current Mode Fuzzy Gain Scheduling of PI Controller for Single Phase UPS Inverter .................. 841
Emine Doğru Bolat

Designing a Self-adaptive Union-Based Rule- Antecedent Fuzzy Controller Based on Two Step Optimization ......................... 850
Chang-Wook Han, Jung-II Park

Image-Based Robust Control of Robot Manipulators in the Presence of Uncertainty ..................................................... 858
Min Seok Jie, Kang Woong Lee
Table of Contents – Part I  XXVII

Real Time Obstacle Avoidance for Mobile Robot Using Limit-Cycle and Vector Field Method ................................. 866
Min Seok Jie, Joong Hwan Baek, Yeh Sun Hong, Kang Woong Lee

Developing Knowledge-Based Security-Sense of Networked Intelligent Robots .................................................. 874
M. Omar Faruque Sarker, ChangHwan Kim, Bum-Jae You, Mohammed Golam Sadi

Autonomous Action Generation of Humanoid Robot from Natural Language ....................................................... 882
Hirokazu Watabe, Tsukasa Kawaoka

Robust Positioning a Mobile Robot with Active Beacon Sensors ................................................................. 890
JaeMu Yun, SungBu Kim, JangMyung Lee

Intelligent Systems Applications

The Implementation of an Improved Fingerprint Payment Verification System ................................................. 898
Woong-Sik Kim, Weon-Hee Yoo

Capacity Planning for Scalable Fingerprint Authentication ................................................................. 906
Byungkwan Park, Daesung Moon, Yongwha Chung, Jin-Won Park

Security Analysis of Secure Password Authentication for Keystroke Dynamics ............................................. 916
Hyunsoo Song, Taekyoung Kwon

Security Techniques Based on EPC Gen2 Tag for Secure Mobile RFID Network Services .............................. 924
Namje Park, Jin Kwak, Seungjoo Kim, Dongho Won, Howon Kim

A Hardware Implementation of Lightweight Block Cipher for Ubiquitous Computing Security .............................. 935
Jong Sou Park, Sung-Hwan Kim, Dong Seong Kim

Intelligent Environment for Training of Power Systems Operators ............................................................. 943
Gustavo Arroyo-Figueroa, Yasmin Hernandez, Enrique Sucar

Building a Better Air Defence System Using Genetic Algorithms ............................................................ 951
Millie Pant, Kusum Deep
Artificial Immune System-Based Customer Data Clustering in an e-Shopping Application .................................................. 960
  D.N. Sotiropoulos, George A. Tsihrintzis, A. Savvopoulos, M. Virvou

A GA Driven Intelligent System for Medical Diagnosis .................. 968
  Grigorios Beligiannis, Ioannis Hatzilygeroudis, Constantinos Koutsojannis, Jim Prentzas

Combined Gene Selection Methods for Microarray Data Analysis ...... 976
  Hong Hu, Jiuyong Li, Hua Wang, Grant Daggard

Toward an Intelligent Local Web Search in Telematics .................. 984
  Dae-Young Choi

A Method of Recommending Buying Points for Internet Shopping Malls ............................................................... 992
  Eun Sill Jang, Yong Kyu Lee

A Sensuous Association Method Using an Association Mechanism for Natural Machine Conversation ................................. 1002
  Seiji Tsuchiya, Hirokazu Watabe, Tsukasa Kawaoka

Motion-Based Interaction on the Mobile Device for User Interface .... 1011
  Jonghun Baek, Ik-Jin Jang, Hyun Deok Kim, Jae-Soo Cho, Byoung-Ju Yun

Role-Task Model for Advanced Task-Based Service Navigation System 1021
  Yusuke Fukazawa, Takefumi Naganuma, Kunihiro Fujii, Shoji Kurakake

A Discretization Algorithm That Keeps Positive Regions of All the Decision Classes ..................................................... 1029
  Honghai Feng, Baoyan Liu, LiYun He, Bingru Yang, Yueli Li

Forecasting Region Search of Moving Objects .......................... 1037
  Jun Feng, Linyan Wu, Yuelong Zhu, Toyohide Watanabe

An Index-Based Time-Series Subsequence Matching Under Time Warping ............................................................... 1043
  Byoungchol Chang, Jaehyuk Cho, Sang-Wook Kim, Miyoung Shin

An Intrinsic Technique Based on Discrete Wavelet Decomposition for Analysing Phylogeny .............................................. 1051
  Atulya K. Nagar, Dilbag Sokhi, Hissam Tawfik
Analysis of Selfish Behaviors on Door-to-Door Transport System ........ 1059
Naoto Mukai, Toyohide Watanabe, Jun Feng

Fault-Tolerant Cluster Management Tool for Self-managing of Cluster DBMS ................................................................. 1067
Jae-Woo Chang, Yong-Ki Kim, Young-Chang Kim

Speed Control of Averaged DC Motor Drive System by Using Neuro-PID Controller ................................................. 1075
Ali Bekir Yildiz, Mehmet Zeki Bilgin

Automatic Detection of SLS Violation Using Knowledge Based Systems ................................................................. 1083
Pedro Alípio, José Neves, Paulo Carvalho

Two-Level Dynamic Programming Hardware Implementation for Real Time Processing ................................................. 1090
Yong Kim, Hong Jeong

Towards the Formalization of Innovating Design: The TRIZ Example ................................................................. 1098
Cecilia Zanni, François Rousselot

Invited Session Papers

Experience Management and Engineering Workshop

The “5P” Apprenticeship Which Based the Chinese Traditional Culture ................................................................. 1106
Qin Gu, Liang Liang

A Unified 2D Representation of Fuzzy Reasoning, CBR, and Experience Based Reasoning ................................................. 1115
Zhaohao Sun, Gavin Finnie

MBR Compression in Spatial Databases Using Semi-Approximation Scheme ................................................................. 1124
Jongwan Kim, SeokJin Im, Sang-Won Kang, SeongHoon Lee, Chong-Sun Hwang

Annotations: A Way to Capture Experience ................................................................. 1131
Gaëlle Lortal, Myriam Lewkowicz, Amalia Todirascu-Courtier
Cell-Based Distributed Index for Range Query Processing in Wireless Data Broadcast Systems ............................................. 1139
   SeokJin Im, MoonBae Song, Jongwan Kim, Sang-Won Kang,
   Chong-Sun Hwang, SeongHoon Lee

Genetic-Fuzzy Modeling on High Dimensional Spaces ................. 1147
   Joon-Min Gil, Seong-Hoon Lee

Considering a Semantic Prefetching Scheme for Cache Management in Location-Based Services .................................. 1155
   Sang-Won Kang, SeokJin Im, Jongwan Kim, SeongHoon Lee,
   Chong-Sun Hwang

A Unified Framework for u-Edutainment Development of Using e-Learning and Ubiquitous Technologies ......................... 1163
   SangHyun Jang, Bokyung Kye, YunHee Kang

Trace-Based Framework for Experience Management and Engineering ................................................................. 1171
   Julien Laflaquiere, Lotfi S. Settouti, Yannick Prié,
   Alain Mille

Invited Sessions

Industrial Applications of Intelligent Systems

Neural Network Classification of Diesel Spray Images .................... 1179
   Simon D. Walters, Shaun H. Lee, Cyril Crua, Robert J. Howlett

Molecular Sequence Alignment for Extracting Answers for Where-Typed Questions from Google Snippets ..................... 1190
   Alejandro Figueroa, John Atkinson

Temperature Field Estimation for the Pistons of Diesel Engine 4112 ................................................................. 1198
   Zuoqin Qian, Honghai Liu, Guangde Zhang, David J. Brown

Fuzzy and Neuro-fuzzy Techniques for Modelling and Control ........ 1206
   Shaun H. Lee, R.J. Howlett, Simon D. Walters

Clustering for Data Matching .............................................. 1216
   Edward Tersoo Apeh, Bogdan Gabrys
Intelligent Optical Otolith Classification for Species Recognition of Bony Fish .................................................. 1226
   Dionisios Lefkaditis, Graeme J. Awcock, R.J. Howlett

Information Engineering and Applications in Ubiquitous Computing Environments

General Drawing of the Integrated Framework for Security Governance .................................................. 1234
   Heejun Park, Sangkyun Kim, Hong Joo Lee

A Study on the Rain Attenuation Prediction Model for Ubiquitous Computing Environments in Korea .................. 1242
   Dong You Choi

   JooYoung Lee, HoWon Kim

A Study on Development of Business Factor in Ubiquitous Technology .................................. 1259
   Hong Joo Lee, Choon Seong Leem, Sangkyun Kim

Design of a RFID-Based Ubiquitous Comparison Shopping System .................................. 1267
   Kyoung Jun Lee, Young Hwan Seo

Author Index ...................................................................... 1285