

Contents – Part II

Intelligent Big Data Exploitation

Redhyte: Towards a Self-diagnosing, Self-correcting, and Helpful Analytic Platform.	3
<i>Wei Zhong Toh, Kwok Pui Choi, and Limsoon Wong</i>	
Learning to Filter User Explicit Intents in Online Vietnamese Social Media Texts.	13
<i>Thai-Le Luong, Thi-Hanh Tran, Quoc-Tuan Truong, Thi-Minh-Ngoc Truong, Thi-Thu Phi, and Xuan-Hieu Phan</i>	
Retrieving Rising Stars in Focused Community Question-Answering.	25
<i>Long T. Le and Chirag Shah</i>	

Cloud and Network Computing

Fuzzy Inference System for Mobility Prediction to Control HELLO Broadcasting in MANET.	39
<i>Tran The Son, Hoang Bao Hung, Vo Duy Thanh, Nguyen Vu, and Hoa Le-Minh</i>	
Resource Allocation for Virtual Service Based on Heterogeneous Shared Hosting Platforms.	51
<i>Nguyen Minh Nhut Pham, Thu Huong Nguyen, and Van Son Le</i>	
Design and Implementation of Data Synchronization and Offline Capabilities in Native Mobile Apps.	61
<i>Kamoliddin Mavlonov, Tsutomu Inamoto, Yoshinobu Higami, and Shin-Ya Kobayashi</i>	

Multiple Model Approach to Machine Learning

A Machine Learning Based Technique for Detecting Digital Image Resampling.	75
<i>Hieu Cuong Nguyen</i>	
Empirical Study of Social Collaborative Filtering Algorithm.	85
<i>Firas Ben Kharrat, Aymen Elkhelifi, and Rim Faiz</i>	

Cooperation Prediction in GitHub Developers Network with Restricted Boltzmann Machine.	96
<i>Roman Bartusiak, Tomasz Kajdanowicz, Adam Wierzbicki, Leszek Bukowski, Oskar Jarczyk, and Kamil Pawlak</i>	
Fast and Accurate - Improving Lexicon-Based Sentiment Classification with an Ensemble Methods	108
<i>Łukasz Augustyniak, Piotr Szymański, Tomasz Kajdanowicz, and Przemysław Kazienko</i>	
Adaptive Ant Clustering Algorithm with Pheromone	117
<i>Urszula Boryczka and Jan Kozak</i>	
Link Prediction in a Semi-bipartite Network for Recommendation.	127
<i>Aastha Nigam and Nitesh V. Chawla</i>	
Hybrid One-Class Ensemble for High-Dimensional Data Classification	136
<i>Bartosz Krawczyk</i>	
Advanced Data Mining Techniques and Applications	
A Lossless Representation for Association Rules Satisfying Multiple Evaluation Criteria	147
<i>Marzena Kryszkiewicz</i>	
Learning Algorithms Aimed at Collinear Patterns	159
<i>Leon Bobrowski and Paweł Zabielski</i>	
Fast Human Activity Recognition Based on a Massively Parallel Implementation of Random Forest.	169
<i>Jan Janoušek, Petr Gajdoš, Pavel Dohnálek, and Michal Radecký</i>	
An Item-Based Music Recommender System Using Music Content Similarity	179
<i>Ja-Hwung Su and Ting-Wei Chiu</i>	
Efficient Mining of Fuzzy Frequent Itemsets with Type-2 Membership Functions	191
<i>Jerry Chun-Wei Lin, Xianbiao Lv, Philippe Fournier-Viger, Tsu-Yang Wu, and Tzung-Pei Hong</i>	
Improving the Performance of Collaborative Filtering with Category-Specific Neighborhood	201
<i>Karnam Dileep Kumar, Polepalli Krishna Reddy, Pailla Balakrishna Reddy, and Longbing Cao</i>	
Mining Drift of Fuzzy Membership Functions	211
<i>Tzung-Pei Hong, Min-Thai Wu, Yan-Kang Li, and Chun-Hao Chen</i>	

Mining Discriminative High Utility Patterns	219
<i>Jerry Chun-Wei Lin, Wensheng Gan, Philippe Fournier-Viger, and Tzung-Pei Hong</i>	
An Experimental Study on Cholera Modeling in Hanoi	230
<i>Ngoc-Anh Thi Le, Thi-Oanh Ngo, Huyen-Trang Thi Lai, Hoang-Quynh Le, Hai-Chau Nguyen, and Quang-Thuy Ha</i>	
On Velocity-Preserving Trajectory Simplification	241
<i>Josh Jia-Ching Ying and Ja-Hwung Su</i>	

Computational Intelligence in Data Mining for Complex Problems

Sink Toward Source Algorithm Finding Maximal Flows on Extended Mixed Networks	253
<i>Viet Tran Ngoc, Hung Hoang Bao, Chien Tran Quoc, Thanh Le Manh, and Van Hoang Thi Khanh</i>	
An Efficient Algorithm for a New Constrained LCS Problem	261
<i>Daxin Zhu, Yingjie Wu, and Xiaodong Wang</i>	
A New Betweenness Centrality Algorithm with Local Search for Community Detection in Complex Network	268
<i>Youcef Belkhiri, Nadjat Kamel, and Habiba Drias</i>	
Meta-Apriori: A New Algorithm for Frequent Pattern Detection	277
<i>Neyla Cherifa Benhamouda, Habiba Drias, and Célia Hireche</i>	
Solving a Malleable Jobs Scheduling Problem to Minimize Total Weighted Completion Times by Mixed Integer Linear Programming Models	286
<i>Nhan-Quy Nguyen, Farouk Yalaoui, Lionel Amodeo, Hicham Chehade, and Pascal Toggenburger</i>	
Theoretical Analysis of Workload Imbalance Minimization Problem on Identical Parallel Machines.	296
<i>Yassine Ouazene, Farouk Yalaoui, Alice Yalaoui, and Hicham Chehade</i>	

Collective Intelligence for Service Innovation, Technology Opportunity, E-Learning and Fuzzy Intelligent Systems

A New Cosine Similarity Matching Model for Interior Design Drawing Case Reasoning	307
<i>Kuo-Sui Lin and Ming-Chang Ke</i>	
The Framework of Discovery Early Adopters' Incipient Innovative Ideas . . .	319
<i>Chao-Fu Hong, Mu-Hua Lin, and Woo-Tsong Lin</i>	

Collaborative Learning in Teacher Education Community for Pre-service Teacher Practice Learning	328
<i>Chia-Ling Hsu, Yi-Fang Chang, Chien-Han Chen, and Huey-Fang Ju</i>	
Mobile-Assisted Model of Teaching and Learning English for IT Students . . .	336
<i>Ivana Simonova and Petra Poulova</i>	
IPO and Financial News	346
<i>Jia-Lang Seng, Pi-Hua Yang, and Hsiao-Fang Yang</i>	
An Evaluation of the Conversation Agent System	354
<i>Ong Sing Goh, Yogan Jaya Kumar, Ngo Hea Choon, Pui Huang Leong, and Mohammad Safar</i>	
Simulation of Each Type of Defibrillation Impulses by Using LabVIEW	366
<i>Lukas Peter and Radek Osmancik</i>	
Analysis of Image, Video and Motion Data in Life Sciences	
Building the Facial Expressions Recognition System Based on RGB-D Images in High Performance	377
<i>Trung Truong and Ngoc Ly</i>	
Zero-Velocity Detectors for Orientation Estimation Problem	388
<i>Agnieszka Szczesna, Przemysław Prusowski, Andrzej Polański, Damian Peszor, and Konrad Wojciechowski</i>	
Analysis of Human Motion Data Using Recurrence Plots and Recurrence Quantification Measures.	397
<i>Henryk Josiński, Agnieszka Michalczyk, Romualda Mucha, Adam Świtoński, Agnieszka Szczesna, and Konrad Wojciechowski</i>	
Cellular Nuclei Differentiation Evaluated by Automated Analysis of CLSM Images.	407
<i>Julita Kulbacka, Marek Kulbacki, Jakub Segen, Grzegorz Chodaczek, Magda Dubinska-Magiera, and Jolanta Saczko</i>	
Selected Space-Time Based Methods for Action Recognition	417
<i>Sławomir Wojciechowski, Marek Kulbacki, Jakub Segen, Rafał Wyciśłok, Artur Bąk, Kamil Wereszczyński, and Konrad Wojciechowski</i>	
Recent Developments in Tracking Objects in a Video Sequence	427
<i>Michał Staniszewski, Mateusz Kloszczyk, Jakub Segen, Kamil Wereszczyński, Aldona Drabik, and Marek Kulbacki</i>	

Recent Developments on 2D Pose Estimation From Monocular Images	437
<i>Artur Bąk, Marek Kulbacki, Jakub Segen, Dawid Świątkowski, and Kamil Wereszczyński</i>	
Video Editor for Annotating Human Actions and Object Trajectories.	447
<i>Marek Kulbacki, Kamil Wereszczyński, Jakub Segen, Michał Sachajko, and Artur Bąk</i>	
Learning Articulated Models of Joint Anatomy from Ultrasound Images.	458
<i>Jakub Segen, Kamil Wereszczyński, Marek Kulbacki, Artur Bąk, and Marzena Wojciechowska</i>	
Facial Reconstruction on the Basis of Video Surveillance System for the Purpose of Suspect Identification	467
<i>Damian Pęszor, Michał Staniszewski, and Marzena Wojciechowska</i>	
Efficient Motion Magnification	477
<i>Mariusz Domżał, Dawid Sobel, Jan Kwiatkowski, Karol Jędrasiak, and Aleksander Nawrat</i>	
Real Time Thermogram Enhancement by FPGA-Based Contrast Stretching. . . .	487
<i>Jan Kwiatkowski, Krzysztof Daniec, Karol Jędrasiak, Dawid Sobel, Mariusz Domżał, and Aleksander Nawrat</i>	

Real World Applications in Engineering and Technology

Dijkstra-Based Selection for Parallel Multi-lanes Map-Matching and an Actual Path Tagging System.	499
<i>Mick Chang-Heng Lin, Fu-Ming Huang, Po-Ching Liu, Yu-Hsiang Huang, and You-shan Chung</i>	
PBX Autoresponder System for Information Lookup of Pupil Records.	509
<i>Nguyen Hong Quang, Trinh Van Loan, and Bui Duy Chien</i>	
Possibilities for Development and Use of 3D Applications on the Android Platform.	519
<i>Tomas Marek, Ondrej Krejcar, and Ali Selamat</i>	

Ontology-Based Software Development

Ensuring the Correctness of Business Workflows at the Syntactic Level: An Ontological Approach.	533
<i>Thi-Hoa-Hue Nguyen and Nhan Le-Thanh</i>	

Semantic Integration via Enterprise Service Bus in Virtual Organization Breeding Environments	544
<i>Wilcilene Maria Kowal Schratzenstaller, Fabiano Baldo, and Ricardo José Rabelo</i>	

Conceptual Modeling Using Knowledge of Domain Ontology	554
<i>Hnatkowska Bogumiła, Huzar Zbigniew, Tuzinkiewicz Lech, and Dubielewicz Iwona</i>	

Intelligent and Context Systems

Using Context-Aware Environment for Elderly Abuse Prevention	567
<i>Maciej Huk</i>	

Post-search Ambiguous Query Classification Method Based on Contextual and Temporal Information	575
<i>Shahid Kamal, Roliana Ibrahim, and Imran Ghani</i>	

A Context-Aware Implicit Feedback Approach for Online Shopping Recommender Systems	584
<i>Luu Nguyen Anh-Thu, Huu-Hoa Nguyen, and Nguyen Thai-Nghe</i>	

Improving Efficiency of Sentence Boundary Detection by Feature Selection . . .	594
<i>Thi-Nga Ho, Tze Yuang Chong, Van Hai Do, Van Tung Pham, and Eng Siong Chng</i>	

**Modelling and Optimization Techniques in Information Systems,
Database Systems and Industrial Systems**

Pointing Error Effects on Performance of Amplify-and-Forward Relaying MIMO/FSO Systems Using SC-QAM Signals Over Log-Normal Atmospheric Turbulence Channels	607
<i>Duong Huu Ai, Ha Duyen Trung, and Do Trong Tuan</i>	

Portfolio Optimization by Means of a χ -Armed Bandit Algorithm	620
<i>Mahdi Moeini, Oliver Wendt, and Linus Krumrey</i>	

MSDN-TE: Multipath Based Traffic Engineering for SDN	630
<i>Khoa Truong Dinh, Sławomir Kukliński, Wiktor Kujawa, and Michał Ulaski</i>	

DC Programming and DCA for Enhancing Physical Layer Security via Relay Beamforming Strategies	640
<i>Tran Thi Thuy, Nguyen Nhu Tuan, Le Thi Hoai An, and Alain Gély</i>	

Bees and Pollens with Communication Strategy for Optimization	651
<i>Tien-Szu Pan, Thi-Kien Dao, Trong-The Nguyen, Shu-Chuan Chu, and Jeng-Shyang Pan</i>	
Online DC Optimization for Online Binary Linear Classification.	661
<i>Ho Vinh Thanh, Le Thi Hoai An, and Bui Dinh Chien</i>	
Robust Optimization for Clustering	671
<i>Xuan Thanh Vo, Hoai An Le Thi, and Tao Pham Dinh</i>	
Using Valid Inequalities and Different Grids in LP-Based Heuristic for Packing Circular Objects.	681
<i>Igor Litvinchev, Luis Infante, and Edith Lucero Ozuna Espinosa</i>	
Optimisation of Query Processing with Multilevel Storage	691
<i>Nan N. Noon and Janusz R. Getta</i>	

Smart Pattern Processing for Sports

A Real-Time Intelligent Biofeedback Gait Patterns Analysis System for Knee Injured Subjects	703
<i>Putri Wulandari, S.M.N. Arosha Senanayake, and Owais Ahmed Malik</i>	
Pattern Recognition of Brunei Soldier's Based on 3-Dimensional Kinematics and Spatio-Temporal Parameters.	713
<i>D.N. Filzah P. Damit, S.M.N. Arosha Senanayake, Owais Ahmed Malik, and P.H.N. Jaidi P. Tuah</i>	
An Integrated Pattern Recognition System for Knee Flexion Analysis	723
<i>Joko Triloka, S.M.N. Arosha Senanayake, and Daphne Lai</i>	
An EMG Knowledge-Based System for Leg Strength Classification and Vertical Jump Height Estimation of Female Netball Players	733
<i>Umar Yahya, S.M.N. Arosha Senanayake, and Daphne Lai</i>	

Intelligent Services for Smart Cities

Approach to Priority-Based Controlling Traffic Lights	745
<i>Phuoc Vinh Tran, Tha Thi Bui, Diem Tran, Phuong Quoc Pham, and Anh Van Thi Tran</i>	
ALPR - Extension to Traditional Plate Recognition Methods	755
<i>Konrad Kluwak, Jakub Segen, Marek Kulbacki, Aldona Drabik, and Konrad Wojciechowski</i>	

A New Method for Calibrating Gazis-Herman-Rothery Car-Following Model	765
<i>Fergyanto E. Gunawan, Elysia Elysia, Benfano Soewito, and Bahtiar S. Abbas</i>	
Control of Smart Environments Using Brain Computer Interface Based on Genetic Algorithm.	773
<i>Guilherme Antonio Camelo, Maria Luiza Menezes, Anita Pinheiro Sant'Anna, Rosa Maria Vicari, and Carlos Eduardo Pereira</i>	
Comparison of Floor Detection Approaches for Suburban Area.	782
<i>Marcin Luckner and Rafał Górak</i>	
Author Index	793