Special Issue: Selected Best Papers of
International Workshop on Knowledge Discovery and Data Mining 2008 (WKDD 2008)
Track on Information Processing

Guest Editorial

Knowledge discovery and data mining (KDD) have become areas of growing significance because of the recent increasing demand for KDD techniques, including those used in machine learning, databases, statistics, knowledge acquisition, data visualization, and high performance computing. Knowledge discovery and data mining can be extremely beneficial for the field of Artificial Intelligence in many areas, such as industry, commerce, government, education and so forth.

The First International Workshop on Knowledge Discovery and Data Mining (WKDD 2008) are sponsored by Institute of Computer Science, Social Informatics and Telecommunications Engineering (ICST), in cooperation with Ningbo University, China, Wuhan University of Science and Technology Zhongnan Branch, China, and Association for Computing Machinery (ACM). The workshop is hosted by the University of Adelaide, Australia on 23-24 January 2008. Out of more than 400 papers submitted to WKDD 2008 workshop, we have chosen 15 outstanding papers to be published in this special issue, track on Innovative Computing. All these papers have been reviewed in the second round and were recommended to contain 30% more new material to be accepted and published in this Special Issue.

To have a quick look at some papers in this special issue, in the first paper, Lin Sun et. al. give A new approach using neural network is developed as a tool to produce a formula for forecasting fish stock recruitment. Chunguang Wang et. al. give An Automated Test System for Flight Simulator Fidelity Evaluation. Shubo Liu et. al. give An Improved Image Encryption Algorithm based on Chaotic System.

Ickjai Lee et. al. propose a flexible image segmentation framework based on generalized Voronoi diagrams through Euclidean distance transforms and introduce a three-scan algorithm that segments images in O(N) time when N is the number of pixels. Li Yang et. al. propose Formation Mechanism of Green Strategic Alliances and Its Cooperative System for Coal-Mining Eco-Industrial Parks Based on Synthetic Decision Support System. Next, Jimin Li introduces the process of non-self detection and classification based on rule and Sandbox further distinguishing the process of unknown type, based on the definition of system call related to security and event related to security. Jimin Li resolve the problem of traditional sandbox system: the unreliability and insecurity of process and the display of process behavior incompletely caused by denying the execution of a system call. Zhi-Hua Hu proposes A Hybrid System Based on Neural Network and Immune Co-Evolutionary Algorithm for Garment Pattern Design Optimization.

Finally, Zhang Yanduo et. al. discuss the Liquid state machines and does some researches on spiking neural network and Parallel Delta Rule, using them to solve the robot path planning optimization problems.

We hope that the readers of this Special Issue enjoy reading and finding it useful in their future research. We first would like to thank the authors who worked hard to add substantial materials to the conference versions. Also, we would like to thank the Editorial Board of the Journal of Computers for the helpful instructions and guidance.

Guest Editors:

Qi Luo
Chair, IEEE SMC Technical Committee on Education Technology and Training, USA
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Associate Editor, IEEE Transactions on Systems, Man & Cybernetics, Part C
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Dr. Qi Luo, Senior Lecturer, Chair of Intelligent Information Technology Application Research Association, Hong Kong, Chair of IEEE SMC Technical Committee on Education Technology and Training, USA. With the highest honor, He joined the School of Electrical and Information Engineering, Wuhan Institute of Technology. He has wide research interests, mainly including intelligent computing, data mining, learning technology, distant education. In these areas he has published over 40 papers in international journals or conference proceedings. He has won various awards in the past.

He served as workshop chair of ICCS 2007, IPC 2007, session chair of ICMLC 2007 and ICNC 2007, advisory committee or program committee member of various international ACM/IEEE conferences, and he has taken as a guest editor for Special Issue on Web Intelligence and Applications in International Journal of Intelligent Information and Database Systems (IJIIDS). He is also Editors-in-Chief of International Journal of Intelligent Information Technology Application. He has sponsored many conferences such as 2008 International Workshop on Knowledge Discovery and Data Mining (WKDD 2008) and 2008 International Symposium on Intelligent Information Technology Application (IITA 2008).

Prof. Ben K. M. Sim, has extensive experience serving as Editor and Guest Editor of many international journals. Currently serving his second term as an Associate Editor of the IEEE Transactions on Systems, Man, and Cybernetics, Part C, he is also the sole Guest Editor of an upcoming special issue on Grid Resource Management in the IEEE Systems Journal, the official journal of the IEEE Systems Council (formed by 15 IEEE Societies). In addition, he serves as an Associate Editor of the International Journal of Applied Systemic Studies, an Editorial board member of the International Journal of Hybrid Intelligent Systems and The Open Cybernetics and Systemics Journal and an Editorial Advisory Board Member of the System and Information Sciences Notes. He is the Editor of five special journal issues in Grid computing and automated negotiation. As the sole Guest Editor, he single-handedly managed and coordinated the review processes for four special journal issues on (i) game-theoretic analysis and stochastic simulation of negotiation agents (IEEE Transactions on SMC, IEEE, USA), (ii) learning approaches for negotiation agents (International Journal of Intelligent Systems (Wiley, USA)), (iii) Agent-based Grid Computing, (Applied Intelligence Journal (Springer, USA)), and (iv) Grid Resource Management (IEEE Systems Journal). Additionally, he is also the Lead Editor of a special issue on negotiation agent and Grid system in the Multiagent and Grid Systems Journal (IOS Press, NL).