

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

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, Wang Weixiang et al. give a new definition of T-F function for discrete global optimization. A T-F function satisfying this definition is proposed. Furthermore, they discuss the properties of the proposed T-F function and design a new discrete T-F function algorithm. Bo Meng gives a formal logic framework for receipt-freeness based on V. Kessler and H. Neumann logic. The framework is then applied to analyze receipt-freeness of two typical voting protocols: FOO and Meng Internet voting protocol. Wang Chu and Depei Qian have proposed a pattern oriented service design method.

Chen Ling et al. have presented a modified Fisher discriminate analysis method for classifying stream data. To satisfy the real-time demand in classifying stream data, this method defines a new criterion for Fisher discriminate analysis. Based on the deep analysis of the relation between the concepts of security and trusted in computer system, Wei-Peng Liu et al. have proposed a novel secure terminal system Based on trusted hardware: U-Key. It describes the architecture design of the whole secure system and analyses the important security function implemented.

Next, Zhou Yong has proposed an improved KNN text classification algorithm based on clustering center. Liu Yan et al. have proposed the design and implementation of an intelligence surveillance system which uses embedded multimedia server as core computing platform. They have carefully designed the embedded server based on MPSoC platform for the surveillance system whose key functionalities include heterogeneous multiprocessors environment set up, key algorithm porting and development framework design.

Finally, Yongqing Wei et al. attempt to structure a risk evaluation model of high-technology project investment based on the uncertain linguistic variable and TOPSIS method. Firstly, this paper discusses the current situation of the research of the high-technology project investment. Then an evaluation indicators system is constructed and the evaluation procedures based on the uncertain linguistic and TOPSIS method. At last, this evaluation method is used to a practical example.

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 his patience throughout this process.

Guest Editors:

Qi Luo

Chair, IEEE SMC Technical Committee on Education Technology and Training, USA
Wuhan Institute of Technology, China

Chair, Intelligent Information Technology Application Research Association, Hong Kong
Editor-in-Chief, International Journal of Intelligent Information Technology Application

Ben K. M. Sim

Associate Editor, IEEE Transactions on Systems, Man & Cybernetics, Part C
Guest Editor, IEEE Systems Journal (IEEE Systems Council)

Associate Editor, International Journal of Applied Systemic Studies (Inderscience)



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 (IJIDS). 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).