Special Issue on Recent Trends and Advances in
Software Technology and Applications

Guest Editorial

With the high development of Computer Science-Technology and Applications, Computer Science-Technology as one of IT's mainstays has become one of the today's main important key engines, and propels the progress of global science & technology and human society. As one of a person's feet, software technology and applications play an important role in Computer Science-Technology and Applications. This Special Issue aims to show some academic researches on recent trends and advances in software technology and applications.

"**New Algorithm for Indefinite Multi-objective Decision Making Based on Multiple-valued Intuitive Fuzzy Set Theory**" studies an indefinite multi-objective decision making which is an interesting and important application of software technology.

"**Software Prepromotion for Non-Uniform Cache Architecture**" proposes software prepromotion technique, which prepromote data using prepromotion instructions as similar as software prefetching does.

In "**A Reliable Multicast Routing Protocol for High-speed Mobile Ad Hoc Networks: R-ODMRP**", with the exploration of active network, R-ODMRP constructed the multicast routing based on the cluster, established a distributed mechanism of the acknowledgment and recovery of packet delivery.

"**Remote Sensing Image Sequence Segmentation Based on the Modified Fuzzy C-means**" presents a remote sensing image sequence segmentation method based on improved FCM algorithm.

"**Multi-Agent Coalition Formation Tactic Based on Grid**" analyzes and researches the relationship between replica transmission and Multi-Agent coalition, put forward a high efficient coalition formation tactic based on linear programming optimization methods of mathematical theory.

"**The study of mathematical expression recognition and the embedded system design**" focused on the recognition of on-line handwritten mathematical expressions, this paper elaborates the structural analysis strategy from the perspective of the general mathematical expression.

"**Analysis of LPG Engine PID Parameter Control of Transient Air-fuel Ration Based on Improved Elman Neural Network**" put forward one kind of air-fuel ration control method which integrates improved Elman neural network with normal PI control.

"**k out of n oblivious transfer protocols from bilinear pairings**" proposes two non-interactive three parties k out of n oblivious transfer protocols from bilinear pairings.

"**A Pre-Identification Method for Chinese Named Entity Recognition**" gives a pre-identification method for Chinese named entity recognition. Definition of bidirectional potential entity name recognition, rough confirmation of potential entity name, segmentation word is proposed.

"**On Practice of Big Software Designing**" promots a "six-oriented practical theory" which was extracted from the practical experience and could serve as a start point of software development practice.

An approach of extracting attributes and semantic relationships from the interfaces utilizing Ontology is presented in "**Describing the Semantic Relation of the Deep Web Query Interfaces Using Ontology Extended LAV**", and WordNet is introduced as an Ontology instrument. The semantic relationships between semantic related attributes are evaluated by the WordNet.

"**Risk Evaluation Model on Enterprises' Complex Information System: A Study Based on the BP Neural Network**" proposes and analyzed eight types of risks of complex information systems in enterprises: infrastructure, systemic projects, system application, information asset, business continuity, information system strategy, information system supplier and outsourcer, external risks of information systems. T

In "**Construction and Visualization of Wheat Roots Model Based on Artificial Life**", two important virtual plant modeling methods are discussed.

"**The Research on Power SCADA Based on J2EE Framework and IEC 61970**" makes a brief description of the advantages of the new generation power SCADA system based on the J2EE framework by using open architecture and object-oriented technologies. T

"**Turing Compute Model for Non-negative Binary Numbers**" analyzes Turing-computable issue of non-negative numbers by relational operations and arithmetic operations.

It is our hope that the readers of this Special Issue could find and would enjoy something, such as the academic ideas, methods and enlightening from the papers in this Special Issue.

Guest Editors:

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Zhou Qihai (1947-) is a Full Professor (from 1995), Doctor's (and Master's) tutor and a head of Information Technology Application Research Institute, School of Economic Information Engineering, Southwestern University of Finance and Economics (SWUFE), China. He graduated in 1982 from Lanzhou University, China; has been working in SWUFE since 1982, successively hold posts from teaching assistant (1982-1987), lecturer (1987-1991), vice professor (1991-1995, promoted anomaly in 1991), professor (1995-today, promoted anomaly in 1995); and got the titles of both "Outstanding experts (enjoyed government subsidies) with outstanding contributions of Sichuan province, China" (summa cum laude of Sichuan province government, 1996) and "One hundred academic and managerial leading heads of China informationalization" (summa cum laude about this domain in China, 2006). He has published 46 academic books and over 212 academic papers; and is President of IITAA (International Information Technology & Applications Association), Chair or Organizing Chair of some important international conferences. His research interests are in algorithm research, computational geometry, isomorphic information processing, economics & management computation, eBusiness, and so on. More (in Chinese) about Prof. Zhou Qihai is shown here: http://www.iitaa.com/member-ZhouQiHai.doc

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