Editorial Preface

Open Ecological Cloud

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This regular issue of the *International Journal of Web Services Research* (JWSR) collects five papers. In the first paper entitled “Bottleneck-Aware Resource Allocation for Service Processes: A New Max-Min Approach,” the authors discuss the bottleneck activity within a service process and optimization criterion for resource allocation. They propose a bottleneck-aware allocation approach that focuses on dynamic user requirements by formulating resource allocation as a max-min problem. This approach allocates resources proportional to the workload of each activity within a process. The simulation results show that the proposed approach can reduce the average cycle time and improve resource utilization based on the business process simulator.

In the second paper entitled “Probabilistic Graph Model Mining User Affinity in Social Networks,” the authors find that the similarity between users depends on network topology and is also related closely to the interdependence among users. They use the Bayesian network as the framework for uncertain knowledge discovery and propose a MapReduce-based social user Bayesian network (SUBN) construction method. The experimental results indicate the efficiency and correctness of the Bayesian network-based user similarity discovery algorithm.

In the third paper entitled “Rider Chaotic Biography Optimization-Driven Deep-Stacked Auto-Encoder for Big Data Classification Using Spark Architecture,” the authors propose a novel technique for handling big data using the Spark framework. This technique undergoes two steps for classifying big data, including feature selection and classification. Besides, it includes a rider chaotic biography optimization algorithm, which integrates the rider optimization algorithm and the standard chaotic-biogeography-based optimization algorithm.

In the fourth paper entitled “Web Service Clustering Approach Based on Network and Fused Document-Based and Tag-Based Topics Similarity,” the authors propose a new approach with two models, which is helpful to the service clustering problem. They design a Document-Tag LDA model (DTag-LDA) that considers Web services’ tag information. The authors further propose an efficient Document weight and Tag weight-LDA model (DTw-LDA), which fuses a multi-modal data network based on the first model.

In the fifth paper entitled “Model-Driven Open Ecological Cloud Enterprise Resource Planning,” the authors discuss the problems and challenges to cloud enterprise resource planning (ERP) software. According to the changing requirements of enterprises and users, they propose a “knowledge + data” model-driven open ecological cloud ERP framework. The proposed model uses model-driven architecture and takes business as the center. The case studies show that the proposed framework is capable of fulfilling the requirements of enterprises and users.
About Editor-in-Chief

Liang-Jie (LJ) Zhang received his Ph.D. in Pattern Recognition and Intelligent Control from Tsinghua University. Currently, he is the Chief Technology Officer (CTO) and Senior Vice President of Kingdee International Software Group Company Limited. Dr. Zhang has published more than 160 technical papers in journals, book chapters, and conference proceedings. He has 50 granted patents. He was elected as an IEEE Fellow in 2011, and in the same year, won the Technical Achievement Award for pioneering contributions to Application Design Techniques in Services Computing from the IEEE Computer Society. He has served as the President of Shenzhen Big Data Alliance since 2013. Dr. Zhang is the Editor-in-Chief of the International Journal of Web Services Research (IJWSR).