

Editorial Preface

Improved Service Description and Recommendation

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This regular issue of the International Journal of Web Services Research (JWSR) collects five papers.

The first article is titled *Automatic adaptable intentional service Generating and Publishing Framework using OWL-S annotation*. Because current web service description or modeling languages are semantically poor and conceptually far from the concerns of the user, Emna Khanfir *et al.* introduce a flexible intentional web service publishing framework which could automatically generate the description of intentional adaptable service using semantic annotations and detect the service intention through natural language processing techniques.

The second article is titled *IBCube: An Economical and Incremental Datacenter Network*. To construct much more green energy-saving data centers, Qiong Hu *et al.* propose an economic structure which can interconnect an arbitrary number of servers, and design a novel automatic port allocation algorithm which fully utilizes the switch ports to achieve a minimized number of required switches for data centers with an arbitrary number of servers. The result shows that the design significantly reduces the expenses on network equipment as well as achieves better latency and throughput compared to the previous partial design.

The third article is titled *A Service Recommendation Algorithm Based on Modeling of Dynamic and Diverse Demands*. Since the current service recommendation algorithms are unable to meet the dynamic and varied demands of users, Yanmei Zhang *et al.* propose a service recommendation algorithm based on the latent Dirichlet allocation model and the bipartite graph modeling and random-walk algorithm. The experimental results on a real-world dataset show that the performance of the proposed algorithm is better than that of other relative algorithms regarding accuracy, novelty, and diversity.

The fourth article is titled *Runtime Reusable Weaving Model for Cloud Services using Aspect-Oriented Programming: The Security-related Aspect*. Anas M.R. Alsobeh *et al.* attempt to address the challenge of implementing crosscutting concerns for cloud-based applications and propose a runtime reusable weaving model for weaving security-related crosscutting concerns through layers of cloud computing architecture. The proposed model is implemented using aspect orientation techniques to integrate cloud security solutions at the software-as-a-service layer, it does not require access to the source code of a cloud service, and this can make it easier for the client to reuse the needed security-related crosscutting concerns.

The fifth article is titled *End-to-End Web Service Recommendations by Extending Collaborative Topic Regression*. Due to the increasing number of services, practical service recommenders are in great need, while traditional service recommendations for mashup queries suffers from a mashup-side cold-start problem. Bing Bai *et al.* overcome these issues and propose an end-to-end service recommendation algorithm by extending collaborative topic regression. Experiments on the real-world dataset show that compared with the state-of-the-art methods, the proposed algorithm gains a distinct improvement.

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Liang-Jie (LJ) Zhang received his PhD on 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).