

EDITORIAL PREFACE

Services Composition and Testing

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This issue of the International Journal of Web Services research (JWSR) collects four papers related to services compatibility, privacy and modeling toward service recommendation and composition.

The first paper is titled Usage Profiles: a Process for Discovering Usage Patterns over Web Services and its Application to Service Evolution. Vollino and Becker argue that service users' consumption patterns will support more effective decisions. They propose a framework to cluster client applications and derive service usage profiles. They also show how usage profiles can help service discovery associated with a usage-oriented compatibility assessment algorithm. Experimental results are also reported.

The second paper is titled Improving Energy Efficiency in Web Services: An Agent-based Approach for Service Selection and Dynamic Speed Scaling. Huang and Lin address the issue of green computing on Web services. They formulate the service selection and speed scaling as a Markov Decision problem, and apply multi-agent techniques to

develop an optimization framework. Simulation experimental results are reported.

The third paper is titled *A Social-Aware Service Recommendation Approach for Mashup Creation*. Cao, Xu, Hu, Wang, and Li address the feasibility of leveraging social networks for service recommendation. They propose a social-aware service recommendation approach to recommend a mashup of services based on users' functional specifications. Experimental results are also reported.

The fourth paper is titled Test Pair Selection for Test Case Prioritization in Regression Testing for WS-BPEL Programs. Mei, Cai, Jia, Jiang, and Chan study the structural similarity of XML-based artifacts between test cases in both static and dynamic dimensions, and present how to select test case pairs for prioritization. Benchmarks are used to validate their proposed techniques and empirical results are reported.

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Liang-Jie (LJ) Zhang is Senior Vice President, Chief Scientist, & Director of Research at Kingdee International Software Group Company Limited, and director of The Open Group. Prior to joining Kingdee, he was a Research Staff Member at IBM Thomas J. Watson Research Center. Dr. Zhang has published more than 140 technical papers in journals, book chapters, and conference proceedings. He has 40 granted patents and more than 20 pending patent applications. Dr. Zhang received his Ph.D. on Pattern Recognition and Intelligent Control from Tsinghua University in 1996. He chaired the IEEE Computer Society's Technical Committee on Services Computing from 2003 to 2011. He also chaired the Services Computing Professional Interest Community at IBM Research from 2004 to 2006. Dr. Zhang has served as the Editor-in-Chief of the International Journal of Web Services Research since 2003 and is the founding Editor-in-Chief of IEEE Transactions on Services Computing. 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 IEEE Computer Society. Dr. Zhang also chaired the 2013 IEEE 2nd International Congress on Big Data (BigData 2013), and the 2009 IEEE International Conference on Cloud Computing (CLOUD 2009).