Guest Editorial Preface

Special Issue on New Techniques of Services Computing

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Services computing is a new cross-discipline and widely accepted paradigm that leverages both science and technology to bridge the gap between business services and IT services. The emergence of new paradigms such as Big Data, Mobile Computing, Cloud Computing, has triggered new trends of services computing techniques to enable larger-scale and more pervasive business services. This special issue includes 19 top papers from both the main conference and five special tracks of the Eighth Asia-Pacific Services Computing Conference (APSCC 2014). A part of 15 papers ware published in vol.11, no.4, vol.12, no.1, and vol.12, no.4. This part includes the following 5 research papers:

- In the first paper, "Internet of Things Service Provisioning Platform for Cross-application Cooperation," Zhao et al. propose a service provisioning platform which enables to access heterogeneous devices and expose device capabilities as light-weighted service;
- In the second paper, "An Automatic Recovery Mechanism for Cloud Service Composition," Li et al. propose a hierarchical recovery mechanism including five different recovery algorithms for various kinds of failures in cloud service composition;
- In the third paper, "A Model-based Toolchain to Verify Spatial Behavior of Cyber-Physical Systems," Chen et al. introduce a tool chain for the formal-based engineering of controllers for embedded systems that have to fulfill certain spatial behavioral properties;
- In the fourth paper, "On Measuring Cloud-based Push Services," Chen et al. propose a methodology to assess push services and conduct systematic study on evaluating and comparing four popular push services (i.e., GCM, Gexin, JPush, and ZYPush);
- In the fifth paper, "A Novel Freeway Traffic Speed Estimation Model with Massive Cellular Signaling Data," Zhu et al. propose an approach to estimate traffic speed based on cellular network signaling data, and conduct in-the-field experiments based on real-world data.

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Jia Zhang is an Associate Research Professor at Carnegie Mellon University's Silicon Valley campus. Her recent research interests center on service oriented computing, with a focus on collaborative scientific workflows, Internet of Things, and big data management. She has co-authored one textbook titled Services Computing *and has published over 120 refereed journal papers, book chapters, and conference papers. She is now an Associate Editor of* IEEE Transactions on Services Computing *(TSC) and of* International Journal of Web Services Research *(JWSR), and Editor-in-Chief of* International Journal of Services Computing *(IJSC).*

Hanhua Chen received his Ph.D. degree in 2010 from School of Computer Science and Engineering, Huazhong University of Science and Technology, where he is now working as a professor. His research interests include distributed systems, services computing, online social networks, peer-to-peer systems and wireless sensor networks. He received the National Excellent Doctorial Dissertation Award of China in 2012, the Intel Early Career Faculty Honor Program Award in 2013, and the Excellent Young Scientist Award of NSFC in 2014. He is the PC Co-Chair of the eighth Asia-Pacific Services Computing Conference (APSCC 2014). He is an editor board member of the International Journal of Distributed Sensor Networks *(IJDSN) and a young associate editor of* Frontiers of Computer Science *(FCS). He is a member of the IEEE and ACM.*